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FINAL

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PRELIMINARY REVIEW/VISUAL SITE INSPECTION REPORT

US EPA RECORDS CENTER REGION 5



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Heekin Can Company
Broadwell Road Facility
Cincinnati, Ohio

EPA I.D. No. OHD 004253225

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I. EXECUTIVE SUMMARY

A Preliminary Review and Visual Site Inspection was conducted to identify and assess Solid Waste Management Units (SWMUs) and other Areas of Concern (AOCs) at the Heekin Can Company Broadwell Road facility, Hamilton County, near Cincinnati, Ohio. This report summarizes information found during preliminary review of material from the State of Ohio and EPA Region V files, interviews and the Visual Site Inspection conducted on July 11, 1989, and subsequent data assessments that were performed to evaluate the release potential of hazardous constituents from SWMUs and AOCs.

The Hazardous and Solid Waste Amendment (HSWA) of 1984 expands the scope of the U.S. Environmental Protection Agency's (EPA) authority under the Resource Conservation and Recovery Act (RCRA) to require corrective action for the release of hazardous constituents from SWMUs at those facilities that seek or have sought a RCRA permit. Corrective action applies to all SWMUs and AOCs that have the potential to release hazardous constituents.

The first phase of the Corrective Action Program established by the EPA involves the performance of a RCRA Facility Assessment, or RFA. The RFA includes a Preliminary Review (PR), during which information concerning the facility is reviewed and a preliminary list of SWMUs and AOCs is determined. The PR is followed by a Visual Site Inspection (VSI), that consists of a site visit where SWMUs and AOCs are assessed to determine the potential for release of hazardous wastes or constituents. Pending results of the Visual Site Inspection, a Sampling Visit may be performed to further evaluate hazardous constituent releases to the environment.

The purpose of all three phases of the RFA is to identify SWMUs and AOCs, and to assess the release potential of hazardous constituents from these units. This document summarizes the results of the Preliminary Review and Visual Site Inspection conducted for the Broadwell Road Heekin Can Company Facility.

The Heekin Can Company Broadwell Road facility is located approximately ten miles east of Cincinnati, Ohio, and is about one-half mile south of the Little Miami River (Exhibit 1). The facility currently manufactures three-piece steel cans, and also manufactured two-piece aluminum cans at the time of the VSI, although this process was discontinued on July 17, 1989. Heekin Can Company has manufactured three-piece cans at this site since 1958, and two-piece cans since 1973. Baldwin Piano company owned the plant before 1958 and manufactured World War II bomb fuses at the site. American Nitro Company owned the land during World War I and produced munitions on the property.

Prior to 1986, the facility used a chromium conversion process to treat the surfaces of two-piece aluminum cans. This process used a hexavalent chromium rinse, which was treated with sulfur dioxide to reduce the hexavalent chromium to trivalent chromium. The treatment process created a sludge and supernatant; the sludge was drummed and disposed of offsite, and the supernatant was discharged into an offsite gravel pit. The Ohio EPA had requested since the 1970s that Heekin Can develop an alternative wastewater disposal method, as the discharge did not have a NPDES permit and placed wastewater in potential contact with local ground-water reservoirs that supplied area residents. As a result, in the late 1970s the company attempted to install a wastewater disposal pipeline to the Little Miami River, although this was never completed.

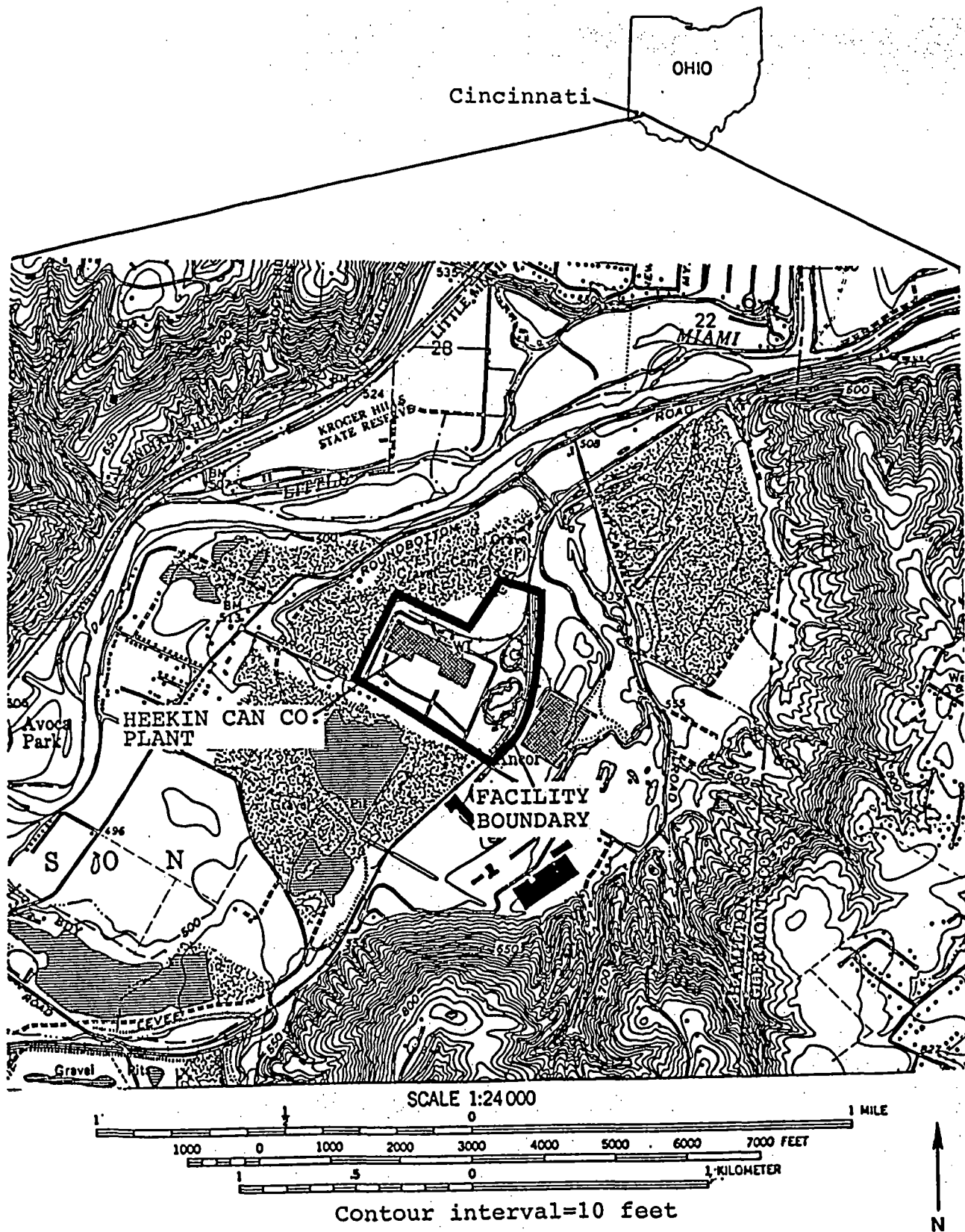


Exhibit 1. Location of the Heekin Can Company
Broadwell Road Facility, Cincinnati,
Ohio

In 1987, Heekin Can Company constructed a Land Application Treatment System whereby treated liquid wastes are sprayed on a vegetated area. By this time, the facility had stopped using the chromium conversion coating process and was instead using an acid rinse. The wastewater from the new rinse process was routed into the Biological Treatment Plant and disposed of in the Land Application Treatment system until July 17, 1989, when the aluminum can line was shut down. The Land Application system is currently operating to dispose of only treated sanitary sewage.

Heekin Can Company produces over 40 55-gallon drums of F003, F005, and D001 wastes weekly in their three-piece can coating operations. The facility submitted a Part B Permit Application in 1984, because these wastes were apparently stored on-site for greater than 90 days. With the change in the aluminum coating method in 1986 and less than 90-day storage of drums, the facility's status was changed to a generator only, and no Part B Permit is required. The facility was required, however, to submit a closure plan for those portions of the facility that managed chromium wastes, and this plan was submitted and approved by the Ohio EPA in late 1986.

Heekin Can Company also uses dozens of drums of organic coatings and solvents products weekly in their manufacturing processes, and the use of these organic materials has produced substantial volatile organic air emissions. These emissions have been under regulation since at least the early 1970s. Heekin Can currently operates a vapor collection system and three incinerators for the collection and destruction of these vapors. However, the company had excessive violations of emission standards between 1982 and 1984. Heekin Can was fined \$37,000 as a result of these violations. The incinerators have malfunctioned a number of times since 1986.

Based on the information acquired during the Preliminary Review, a preliminary SWMU list was included in the VSI Agenda Letter (Attachment A) which identified 13 potential SWMUs. These SWMUs included the wastewater treatment system, drummed waste storage areas, former wastewater discharge points, waste collection points in the manufacturing facility, and emission controls. As a result of the VSI, additional SWMUs were identified, and some of the preliminary SWMUs were eliminated from consideration.

Exhibit 2 presents the final list of SWMUs identified as a result of both the Preliminary Review and Visual Site Inspection. This list includes 23 SWMUs and one AOC, the locations of which are shown in Exhibits 3 and 4. Each unit is described in detail in Section V and VI of this report.

Based on a review of the information acquired and summarized for this site, the following generalizations can be made:

- o Almost all of the SWMUs currently exhibit a low or moderate release potential to soil, ground water, surface water, air, or a potential to generate subsurface gas. A number of SWMUs, such as the Vapor Collection System (SWMU No. 1), Incinerators, (SWMU No. 2), and Biological Treatment Plant, are intended to permit air emissions by design of the unit. These emissions, however, are within regulatory compliance as long as the unit functions properly. The Land Application Treatment Unit (SWMU No. 23) is also designed to release treated, presumably non-hazardous water to the soil. Only the Scraper Coating Buckets (SWMU No. 3) currently exhibit a moderate to high release potential of hazardous constituents to an environmental media (air).

Exhibit 2

List of Solid Waste Management Units and
Areas of Concern

Heekin Can Company Broadwell Road Facility

SWMU No.	1	Vapor Collection System
SWMU No.	2	Volatile Vapor Incinerators (3)
SWMU No.	3	Scraper Coating Buckets
SWMU No.	4	Waste Coating Buckets (2)
SWMU Nos.	5A, 5B 5C, 5D	Satellite Waste Accumulation Areas
SWMU No.	6	Satellite Scrap Metal Collection Areas
SWMU No.	7	Scrap Metal Bailers
SWMU No.	8	Scrap Metal Storage Area
SWMU No.	9A, 9B 9C	Safety-Kleen Units (3)
SWMU No.	10	#1 Empty Product Drum Storage Area
SWMU No.	11	#1 Drummed Hazardous Waste Storage Area
SWMU No.	12	#2 Empty Product Drum Storage Area
SWMU No.	13	#2 Drummed Hazardous Waste Storage Area
SWMU No.	14	Scrap Yard
SWMU No.	15	Former Drummed Chrome-Sludge Storage Area
SWMU No.	16	Acid Bath Sump
SWMU No.	17	Acid Waste Storage Tanks
SWMU No.	18	Neutralization Bath
SWMU No.	19	Former Chrome-Waste Storage Tank
SWMU No.	20	Biological Treatment Plant
SWMU No.	21	Wet Well
SWMU No.	22	Storage Pond
SWMU No.	23	Land Application Treatment Area
AOC A		Drummed Product Storage Area

- o Although no obvious releases were observed on the VSI, sampling is recommended for a number of SWMUs to confirm facility claims that no historic releases have occurred on site. Sampling of soil surrounding the former drummed chrome sludge storage area (SWMU No. 15) is suggested to confirm the assertion by the facility that there have been no releases in the past. Sampling is also suggested for the abandoned storage tank in the Scrap Yard (SWMU No 14), should facility representatives not be able to confirm current tank contents. Sampling of the spray field wells (SWMU No. 23) and the storage pond (SWMU No. 22) is also suggested to assess the effectiveness of the Land Application Treatment. It is also suggested that the areas of product leakage around AOC A be properly cleaned.

The following document summarizes information acquired during the PR/VSI concerning SWMUs and AOCs and the release potential for hazardous constituents from these units. The report has an Introduction (Chapter II), followed by a discussion of the Environmental Setting (Chapter III), Release Pathways (Chapter IV), Descriptions of Solid Waste Management Units (Chapter V), Areas of Concern (Chapter VI), Summary of Suggested Further Actions (Chapter VII), and the References (Chapter VIII). The VSI Agenda Letter, VSI Summary, VSI Notebook, and VSI Photographs are provided as attachments.

II. INTRODUCTION

This report presents the results of the Preliminary Review/ Visual Site Inspection (PR/VSI) conducted for the Heekin Can Company, Cincinnati, Ohio (EPA I.D. No. OHD 004253225). The purpose of this review is to:

1. Identify all solid waste management units (SWMUs) and other areas of concern (AOCs) which are located at the facility.
2. Use information obtained from the file review and VSI to assess the potential for release of hazardous waste or hazardous constituents from each SWMU and AOC.
3. For each SWMU and AOC, determine what further measures, if any, should be taken to safeguard human health and the environment from a release (if those measures have not already been taken or are underway).
4. Screen from further investigation those SWMUs which do not pose a threat to health and the environment.

The information used to prepare this report was acquired from: the Part A and Part B of the facility's Permit Application; files from the Ohio EPA, Southwestern Ohio Air Pollution Control Agency, and EPA Region V information acquired from the facility in response to the VSI Agenda and information needs letter; data gathered during a Visual Site Inspection of the facility on July 11, 1989; and additional information provided by the facility based on new data needs identified during the VSI.

A. Process Description

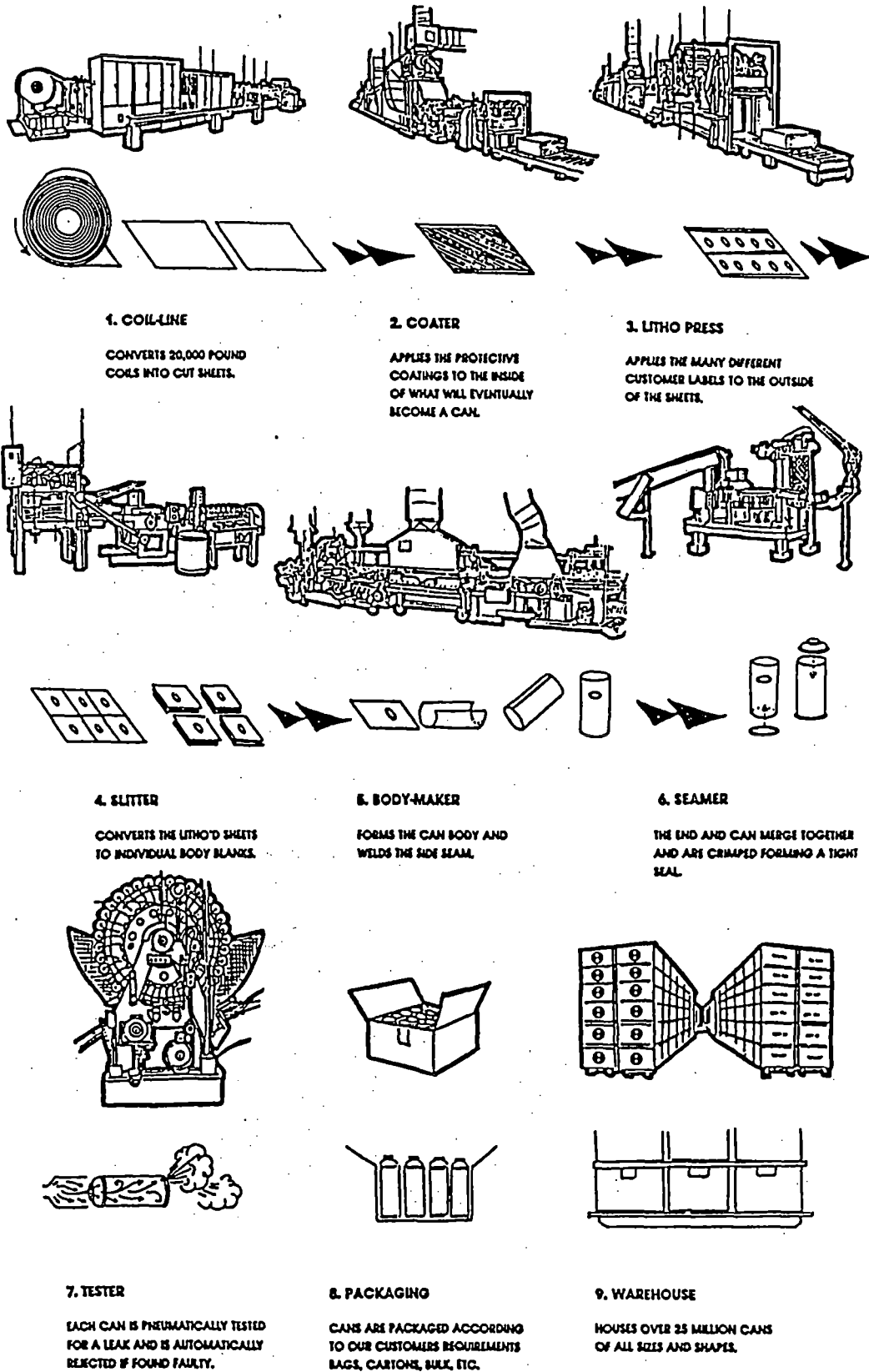
The Heekin Can Company, Broadwell Road facility, is located approximately 10 miles east of Cincinnati, Ohio, one-half mile south of the Little Miami River in Hamilton County

(Reference 37). The operations produced three basic types of cans: aluminum two-piece cans, three-piece steel sanitary cans, and three-piece steel aerosol cans. The aluminum can line was discontinued on July 17, 1989. The plant currently manufactures approximately 2 million steel, food or aerosol cans and 9.5 million can ends daily (Reference 146).

A process flow diagram showing the three-piece can manufacturing operations is presented in Exhibit 5. Manufacturing of a three-piece steel can begins with the coil-line where coiled metal rolls are cut into sheets. A protective coating is sprayed on metal surfaces on lines C1 through C8, with labels applied to the outside of the sheets on litho-press lines P1 through P4. Excess coating paints from these operations are scraped off the line rolls into 5-gallon buckets (SWMU No. 3) and are put in satellite accumulation drums (SWMU No. 5A) for eventual placement in a drummed waste storage area (SWMU No. 13). The applied coatings contain volatile organic compounds; Exhibit 6 presents examples of the various coatings used on these lines, as well as products used on the two-piece line. Emissions from lines C1 and C2 are directed to the Smith #2 incinerator, while emissions from lines C3 and C4 are vented to the Smith #1 incinerator and lines C5 and C6 emissions are burned in the Feco incinerator (SWMU No. 2). Emissions from lines P1 and P4 are filtered then vented to the atmosphere. Various ovens are also used in these processes, emissions from which are vented to the vapor collection system (SWMU No. 1).

Following label application, lithoid sheets are cut into individual body blanks and are formed and welded into a cylinder. A side-seam stripe coating is applied, and emissions from this operation are filtered then vented to the atmosphere (SWMU No. 1). End seals are then added to the can, which is tested, packaged, and warehoused. Heekin Can Company also manufactures additional end seals for these

Manufa rring Process—Three Pie Can



(Reference 146)

Exhibit 5. Process Flow Diagram of Three-Piece Can Manufacturing Operation

Exhibit 6

Typical Coating or Rinsing Products,
Two-Piece and Three-Piece Can lines

Three-Piece Line

Butyl Cellosolve

Hysol 1.5

PM Acetate
(ethylene glycol monomethyl
ether acetate)

Naphtha

Various Paints

Two-Piece Line

Nitric Acid

Sulfuric Acid

Hydrofluoric Acids

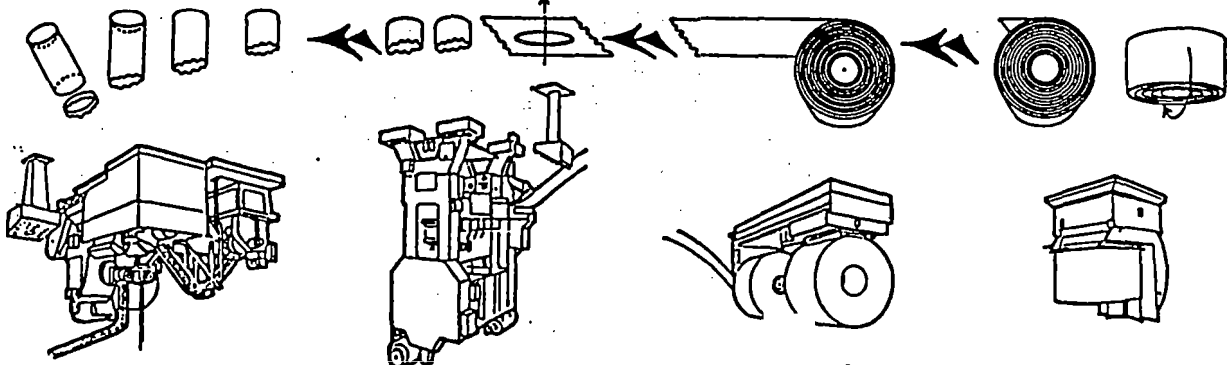
Water-Based Lacquer

(Reference 1)

cans, including aerosol domes; these are applied to the cans by the purchaser after the product has been added. Throughout the manufacturing process, scrap metal is produced which is collected (SWMU No. 6), sorted and stored (SWMU No. 8) for eventual recycling. Waste oils and solvents are collected at satellite accumulation points (SWMU Nos. 5A-D), and Safety-Kleen units (SWMU Nos. 9A-C) are used for parts cleaning, etc.

Until very recently, Heekin Can Company also manufactured two-piece aluminum cans using a drawn and ironed (D&I) process (Exhibit 7). This process involved the punching of one-piece aluminum cups from rolls of metal which were fed through a body-maker that "drew" the aluminum cup to full can length. The can was then trimmed and sent through a washer where it is cleaned with a series of acid and water rinses. The rinsed cans may then have been decorated and/or sealed with an interior "360°" spray. Drippings from the coating operations were collected in a bucket (SWMU No. 4), and transferred to drums in a Satellite Waste Accumulation Point (SWMU Nos. 5B-D) which were then placed in a drummed waste storage area (SWMU No. 11). Following the 360° application, cans were baked, necked or flanged, tested, then stored.

The waste acid wash from the aluminum can rinse was collected in a sump (SWMU No. 16) underlying the rinse line. Waste acid rinsate was transferred to a wastewater treatment area, where the wastes were stored in tanks (SWMU No. 17) and then treated in a neutralization bath (SWMU No. 18) with lime-slurry to increase the pH. The neutralized wastewater was then pumped to a Biological Treatment Plant, (SWMU No. 20) and was mixed with sanitary sewer effluent and further aerated. This treated mixture then flowed into a wet well (SWMU No. 21), and was pumped from the well to a Storage



1. UNFENDER

ALUMINUM STOCK IS RECEIVED INTO ONE PLANT IN THE FORM OF LARGE COILS. THE COILS BEING APPROXIMATELY 2 FEET IN LENGTH AND 60 INCHES WIDE TO PROCESS THE COIL FOR USE, THE COIL IS FIRST PLACED IN THE UNFENDER IN A HORIZONTAL POSITION AND THE PROTECTIVE WRAPPING IS REMOVED, THAT UNFENDER THEN TURNS THE COIL 90° SO THAT IT IS IN A VERTICAL POSITION.

2. UN-COILER

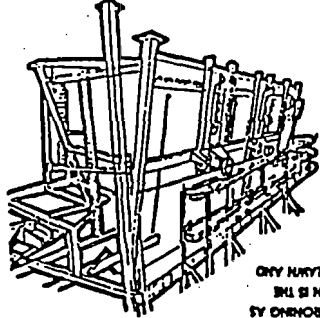
THE COIL OF ALUMINUM IS THEN TRANSPORTED BY A ROLLER TRUCK AND PLACED ON THE UN-COILER, WHICH FEEDS THE COIL OF ALUMINUM TO UNWIND WHILE BEING USED.

3. CUPPER

THE ALUMINUM COIL IS FED INTO A LARGE PRESS CALLED THE CUPPER. THE CUPPER FEEDS 16 SHALLOW CURVES AT EACH STROKE OF THE MACHINE. THE INITIAL DRAWING OF THE DRAWN AND BECKD OPERATION.

4. BODY-MAKER

THE BODYMAKERS ARE THE HEART OF THE DRAWN AND BECKD OPERATION. THE BODYMAKERS IN USE TAKE A PUNCH PISTON DRAWN AND BECKD OPERATION. THE DRAWN AND BECKD OPERATION THAT CONTINUES TO LENGTHEN IN ONE STROKE. UPON LEAVING THE BODYMAKER, IT IS AUTOMATICALLY TREATED TO BECKD IN THIS OPERATION IS THE SECOND HALF OF THE DRAWN AND BECKD OPERATION.



5. PIN OVENS

AFTER DECOATING EACH INDIVIDUAL CAN IS HEATED UP BY A SEPARATE PIN AND TREATMENT. BECKD THROUGH A LONG OVEN WHERE THE PUNCH IS EXPOSED ON THE CAN.



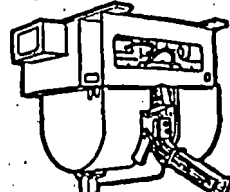
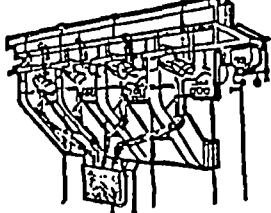
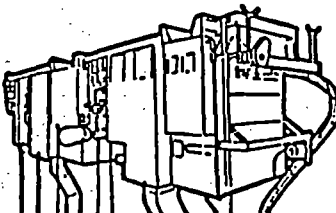
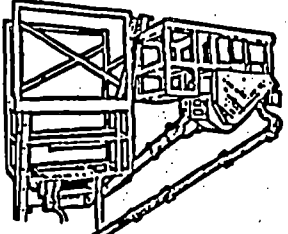
6. WASHER

AT THIS POINT, THE DRAWN AND BECKD CAN IS SEVERELY CONTAMINATED WITH THE DRAWN AND BECKD COMPOUND USED IN THE BODYMAKER. AND MUST BE THOROUGHLY CLEANED WITH ALTERNATE MEANS OF CLEANING AGENTS AND CLEAN WATER AND DRYED BEFORE THE CAN MAY BE DECOATED.



7. DECOATOR

AT THIS POINT, THE CAN MAY HAVE CONTAMINANT PROCURED DURING THE DECOATING OPERATION. WHILE THE BACK OF THE LINE IS IN STORAGE, THE PROCESS OF CHANGING LAYERS OR MATERIAL ADJUSTMENT. THESE STORED CANS CAN BE FED BACK INTO THE LINE THROUGH THE DECOATOR AFTER THE CHANGE IS MADE. THIS PROCEDURE MAKES FOR A MORE EFFICIENT OPERATION.



9. SPRAY BLANK

THE FRONT OF THE CAN MUST ALSO RECEIVE A PROTECTIVE COATING SO THAT THE CONTENTS OF THE CAN DOES NOT COME IN CONTACT WITH THE BASE MATERIAL. THIS IS DONE THROUGH A SPRAY NOZZLE THAT IS ACTIVATED ONLY WHEN A CAN IS IN PLACE.

10. BAKE OVEN

THE FRONT ON THE INTERIOR OF THE CAN MUST ALSO BE BAKED UNTIL IT IS DRY. THE CAN BEHEATS WITH THE LACQUER CURED AND DRIED.

11. WAXER-NECKER-FLANGER

UP TO THIS POINT, THE BACK OF THE CAN AND PERFECTLY STRAIGHT. AND PROVISIONS MUST BE MADE TO ACCOMMODATE THE END THAT WILL BE STAYED ON IN THE CUSTOMER'S PLANT. IN THIS OPERATION, THE TOP OF THE CAN IS FIRST WAXED, THEN NECKED IN FROM 211 DIAMETER TO A 209 OR 208 DIAMETER. THEN FLANGED TO TRY IT WILL ACCOMMODATE THE END TO BE STAYED ON.

12. TESTER

THE FINAL OPERATION IS TO TEST THE CAN FOR SEALING PIN HOLES OR CRACKS. THIS IS DONE BY USING A LIGHT TESTER. AN ELECTRONIC SENSOR IS PLACED IN THE CAN AS IT IS EXPOSED TO ULTRA VIOLET LIGHT. IF THE SENSOR DETECTS LIGHT, THE CAN IS AUTOMATICALLY REJECTED FROM THE LINE.

Pond (SWMU No. 22). Waters for the Storage Pond were pumped to a Land Application Treatment area (SWMU No. 23), where the treated water was sprayed across an open, vegetated area and allowed to infiltrate. Exhibit 8 shows the wastewater treatment processes. Details regarding specific capacities and uses of these SWMUs are included in Section V, while influent/effluent chemistries and historic use of the system are discussed later in this section. With deactivation of the two-piece operation, the Biological Treatment Plant no longer accepts treated process water. However, the plant continues to treat sanitary sewer, which is routed to the Land Application Treatment System.

Heekin Can's manufacturing process requires the use of a number of organic products and produces over 40 55-gallon drums of hazardous waste per week, primarily from the over-coating process. Exhibit 9 presents typical wastes that may be produced. Wastes from the three-piece operations are primarily stored directly behind Building 9 in SWMU No. 13; empty product drums are also stored in this area (SWMU No. 12). Wastes from the Satellite Accumulation Points are generally stored in an area behind the D&I building (SWMU No. 11), and both empty (SWMU No. 10) and full (AOC A) product drums are also stored in this area. Although the two drummed hazardous waste storage areas are generally used to store wastes generated from specific areas, all generated wastes can be placed in either location. An area northwest of the D&I building was also once used to stored drummed chromium sludge (SWMU No. 15), created from previously used manufacturing processes which have since been abandoned. These processes and associated SWMUs (i.e. SWMU No. 19) are discussed later in this section.

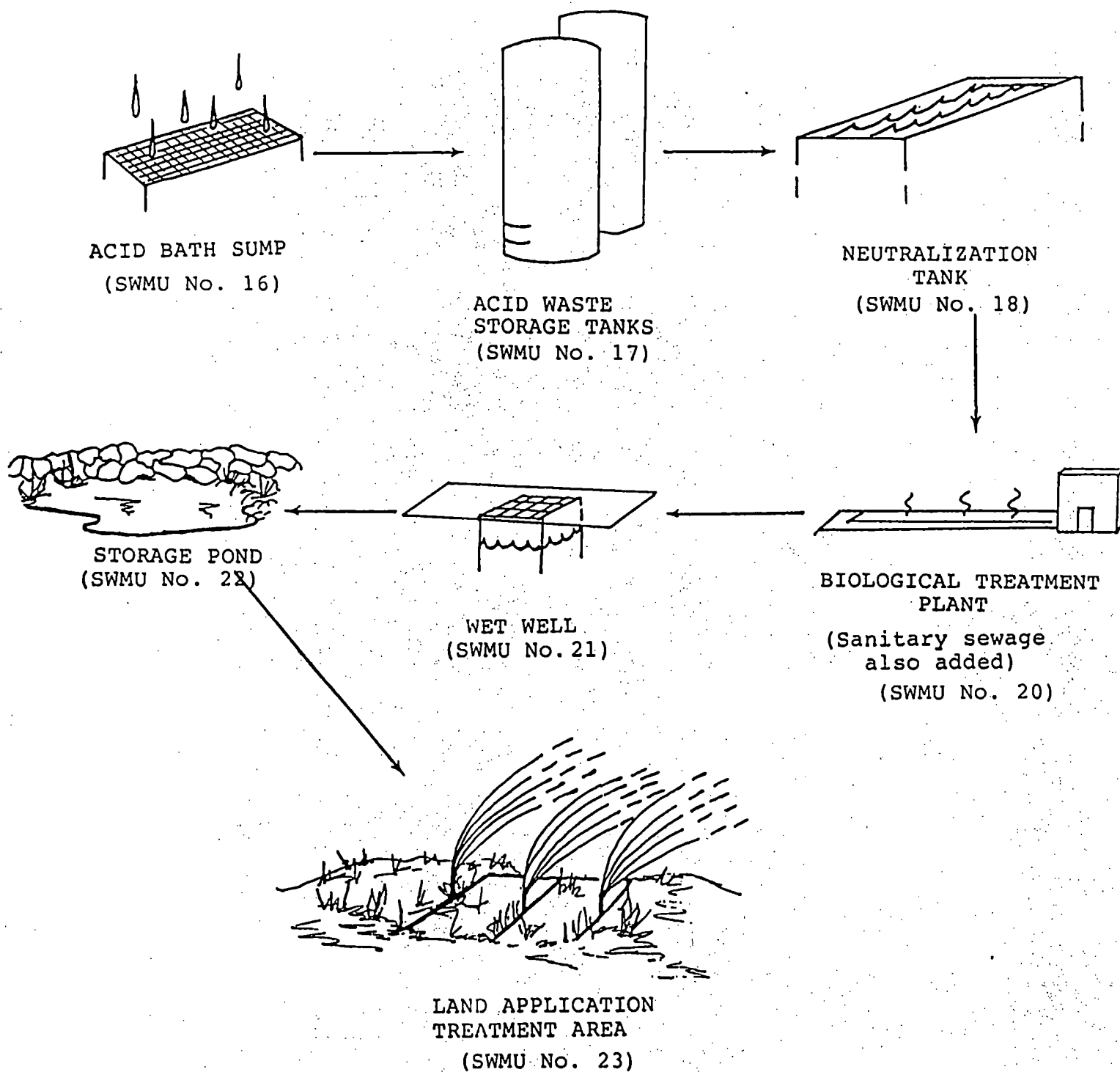


Exhibit 8. Process Flow Diagram of the Waste Treatment Operation.

(Reference 1)

Exhibit 9

Typical Wastes at the
Heekin Can Broadwell Road Facility

<u>Generated on Three-Piece Lines</u>	<u>Generated on Two-Piece Lines*</u>	<u>Satellite Hazardous Waste Accumulation Sites</u>	<u>Safety-Kleen Units</u>
F003 F005	(inactive) acid rinse water epoxies, resins from 360° spray (water born)	F003 F005 D001	Spent mineral spirits (D001, D008) and spent immersion cleaner (F002, F008)

* Between 1986 and July 17, 1989
(Reference 1)

B. Manufacturing and Regulatory History

During the early 1900s, the Heekin family packaged coffee and spices and, due to rising container costs, decided to manufacture their own cans. As a result, Heekin Can Company was started in 1901 with a manufacturing plant in downtown Cincinnati.

The Broadwell Road property was owned by American Nitro Corporation in the early 1900s, and this corporation used the site during World War I to manufacture munitions. Baldwin Piano purchased the property sometime after World War I, and used the site to manufacture World War II bomb fuses. Baldwin Piano also built the original plant building sometime before the 1950s (Reference 1). Additional information regarding the pre-1957 site history could not be provided by the facility. Heekin Can Company purchased the property in approximately 1957, and began manufacturing three-piece steel cans in 1958; production of two-piece aluminum cans began in 1973. Sometime during the 1970s, Heekin Can sold the facility to Diamond International Company who, in turn, sold the plant to WESRAY Corp. in the 1980s. The company's stock went public in 1985, and the Heekin Can representative indicated that WESRAY no longer held an interest in the facility (Reference 1).

Both two-piece (aluminum) and three-piece (steel) cans that have been manufactured at the Heekin Can Company Broadwell Road plant, require the use of various lacquers, coatings, and surface treatments. Exhibit 6 shows typical coating products. The majority of these coatings were (and still are) collected and drummed for off-site disposal. However, until 1986, the facility used a hexavalent chrome conversion coating on the two-piece aluminum can line. Operations on this can line involved a six-stage rinsing and treatment system, whereby overflow containing acids, hexavalent

chromium, organics, and metals (possibly SWMU No. 16) were directed to storage tanks (SWMU No. 17 and 19) in the wastewater treatment system area. These waters were then treated with sulfur dioxide to reduce the hexavalent chromium to trivalent chromium, and also with a lime slurry to raise the pH (SWMU No. 18). A high molecular weight polymer or "floc" was added to the waste, which was then pumped to a solids separation unit. The solids drawn from the bottom of the tank were then centrifuged, creating a sludge and liquid supernatant (Reference 53). The centrifuge was removed prior to the VSI. Exhibit 10 compares wastewater and sludge chemistry with pre-treatment wastewater chemistry.

Early regulatory documentation indicates that both the treated sludge and wastewater supernatant may have initially been disposed of in a "nearby" sand and gravel pit, and sanitary sewage was disposed of in a second off-site pit (Reference 72, Photographs 1-16, 2-9, and 2-10). Ownership of these pits is not clear from early documentation, but facility representatives indicated that the property has always been owned by Dravo, Inc., the present owner. Since Heekin Can Company does not own the pits, these units are not within the scope of this PR/VSI report. Later 1970s documentation states that the sludge was drummed and placed in a storage area (SWMU No. 15) for eventual disposal off site, but the liquid fraction continued to be disposed of in a gravel pit approximately 200 to 300 feet north of the plant site (Reference 70). A warning letter was sent to Heekin Can from the Ohio EPA in the mid-1970s concerning discharge of waters into the gravel pit, and recommended that wastewater disposal in the pit be discontinued (Reference 72).

The Ohio EPA again in 1977 protested the continued discharge of treated wastewater into the gravel pit(s) and asked that alternative disposal practices be developed (Reference 70).

Exhibit 10

Comparison of Influent, Sludge, and Liquid Effluent Chemistries, Chromium Conversion Process*

<u>Influent</u>		<u>Sludge</u>		<u>Effluent</u>	
<u>Characteristic</u>	<u>ppm</u>	<u>Characteristic</u>	<u>Percentage Dry Weight</u>	<u>Characteristic</u>	<u>ppm</u>
Chromium, hexavalent	140	Cr(OH) ₃	3.7%	Chromium, hexavalent	<.05
Aluminum (A-1)	85	Al(OH) ₃	3.3%	Chromium, trivalent	<.09
Phosphate (PO ₄ ⁻³)	750	Ca ₃ (PO ₄) ₂	22.5%	Aluminum (Al ³⁺)	<1.85
Fluoride (F ⁻)	45	CaF ₂	1.3%	Total Phosphate	2.00
Sulfate (SO ₄ ⁻²)	350	CaSO ₄	16.5%	Fluoride (F ⁻)	3.50
Oil and Grease	3850	Oil and Grease	53.0%	Oil and Grease	<15.00

* From the Hydro-Fax Simulation Study
(Reference 74)

In response to this request, Heekin Can proposed a number of disposal possibilities, but generally concluded that discharge through a sewer line to the Little Miami River was the best alternative. Heekin Can and neighboring Senco Fasteners planned jointly to construct the sewer from 1978 through 1980 (References 61-69), but the proposed line was not constructed.

~~The plant continued to discharge effluent into the pit, and in 1980, the Ohio EPA again approached Heekin Can concerning the discharge. The plant was not operating under a NPDES permit, and the Ohio EPA determined in 1983 that, while the wastewater discharge was nonhazardous, a permit was required (Reference 42).~~

~~Heekin Can agreed once more to investigate disposal alternatives. Again, it was determined that a Little Miami River discharge would be the most feasible alternative at that time (Reference 53).~~

~~Heekin Can Company submitted their Part A application in 1980. In 1982, the EPA required that Heekin Can Company submit a Part B Permit Application (Reference 52), and Heekin Can submitted the RCRA Part B permit application in 1983 (Reference 77). The Part B encompassed drummed hazardous waste storage areas and a waste paint/solvent collection tank (which was never constructed), but did not discuss the chromium wastewater treatment system because the facility was awaiting a ruling from the EPA "as to whether the system is covered by RCRA" (Reference 77).~~

~~Throughout the early to mid-1980s, Heekin Can continued to discharge unpermitted, treated wastewater into the gravel pit. In 1984, Heekin Can proposed a land application treatment system be installed to dispose of wastewater from both the sanitary sewer and (chemical) wastewater treatment system~~

(References 35 and 36). During 1984 and 1985, Heekin Can studied and researched the proposed treatment system and appeared to have kept the Ohio EPA informed of the progress of the project (References 24-35). A Permit to Install for the Land Application Treatment System was submitted in 1984.

The chromium conversion coating process was changed in January 1986 to a zirconium coating process. This process was, in turn, abandoned in mid 1986 for a hydrofluoric-sulfuric nitric acid rinse (Reference 20). Exhibit 11 compares the components of each of the three rinses. The wastewater treatment system no longer treated the hazardous hexavalent chromium wastes (only an elementary neutralization unit), and Heekin also claimed less than 90-day storage of drummed waste. The State determined that a Part B permit was no longer in order (Reference 20), although a closure plan for the waste treatment area was required. This plan was submitted (Reference 20) and approved in 1986 (References 8 and 9).

The Land Application Treatment Project proceeded as planned, although the nature of the effluent that would be discharged to the field was altered because of the change in the conversion coating process (Reference 22). Three groundwater monitoring wells were installed, one upgradient and two downgradient (Reference 19, Exhibit 12), and the system was put into service on June 2, 1987 (Reference 11). Water quality data for these wells are presented in Exhibit 13. In 1988, Heekin Can was notified that it was in compliance with Hazardous Waste Rules and Regulations (Reference 4), and the facility was found in compliance with land disposal requirements in 1989 (Reference 2). Heekin Can presently is not required to have an NPDES permit, and have no units that require RCRA permits.

Exhibit 11

Chemical Composition of Two-Piece Can Rinses/ Conversion Coatings

<u>Chromium Conversion*</u>	<u>Zirconium Conversion</u>	<u>Acid Rinse</u>
Alodine 401: 35-45% Phosphoric acid 10-15% Chromic acid 1-2% Hydrofluoric acid	Alkaline 404: 2-4% Nitric acid < 1% Phosphoric acid .5-2.5% Hydrofluoric Acid < 0.1% Fluoraboric Acid	Coral A-CC2, Clene 30F, Clene 100:** Mixture of sulfuric, hydro- fluoric and nitric acids with detergent and surfac- tants

* Balance of percentages not provided

** No percentages provided in reference

(Reference 20)

Exhibit 13

Water Quality for Ground-Water Monitoring Wells
in the Land Application Treatment Area

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Analyte	Concentration mg/l		
	Well OW-1	Well OW-2A	Well OW-3A
Conductivity mhos/cm	851	951	4000
Chloride	18.0	1.01	<0.51
COD, mg/l	172	123	180
Fluoride	0.92	1.25	3.52
Hardness (Total)	403	604	1600
Hardness (Dissolved)	401	472	244
Iron	7.32	37.9	119
Nitrate	7.41	10.9	12.0
Total Phosphorous	0.55	0.43	0.11
Sulfate	120	26.2	<56.2

(Reference 1)

Regulatory History of Air Emissions

As previously discussed, the Heekin Can Company manufacturing operation uses various organic compounds as part of their lithographic and surface treatment processes. Emissions from these sources have been regulated by the Southwestern Ohio Air Pollution Control Agency (SWOAPCA) for over 15 years. Currently, Heekin Can operates the three-piece can coating operation under Permit No. 1431340460K001; the two-piece can operated under Permit No. 1431340460K002.

The earliest record in EPA files regarding Heekin Can emissions discussed an inspection conducted in 1974 (Reference 141), wherein a number of ovens, spray booths, spray lines, and two incinerators were inspected. Recommendations were made at this time to convert to low-solvent coatings.

An inspection was again conducted in 1975 (Reference 140), and by 1979, Heekin Can stated that they had converted 39% of their coatings to low-organic solvent formulations (Reference 138). A 1980 "control plan" from Heekin Can stated that the Company was working with suppliers to develop high solids, water-borne coatings so that Heekin Can Company would be in compliance with State of Ohio regulations by 1982 (Reference 137). The three-piece operation used a variety of applications including oleoresinous materials, phenolic coatings and epoxy coatings at this time.

In September of 1981, Heekin Can Company submitted a variance application for the three-piece operation, requesting an extension of the compliance deadline from April 1, 1982 to December 31, 1985. The Ohio EPA considered this request for deadline extension incomplete, and asked for more information (Reference 132). In the meantime, the two-piece line was found to be in compliance. The earliest records of regular facility inspections began in 1983 (Reference 129).

In December of 1983, the three-piece operation was found to be in violation of Ohio Administrative Code Rule 3745-21-09(D)(2)(a), (b) and (e) (Reference 127). In January of 1984, the Ohio EPA formerly requested that Heekin Can Company submit a Request for an Alternative Compliance Schedule for the lines operating in violation. Heekin Can submitted this schedule on May 11, 1984 (Reference 122). Memos dated September 25, 1984 and November 29, 1984 (References 117 and 119) indicated that the Attorney Generals' office intended to ask for a \$300,000 fine concerning these emission violations.

As of 1984, two incinerators, the Smith No. 1 and Feco, served lines C3 and C4 and C5 and C6, respectively. Data indicate incinerators may have been used since 1974 (Reference 141), ~~although facility representatives indicate that~~ the Feco and Smith #1 incinerators went on line in 1984. The first reported incinerator breakdown was submitted by Heekin in October of 1984, when the Feco incinerator malfunctioned. Throughout 1984, a number of incinerator malfunctions were reported, during which time the coating lines continued to operate. In a memo dated July 26, 1985, SWOAPCO and OEPA expressed general dissatisfaction with Heekin Can Company's ability to come into compliance. Throughout 1984 and 1985, a number of complaints were lodged by the public concerning odors and air emissions from the Heekin Can Plant (References 109, 113, and 121).

The Ohio EPA (OEPA) submitted Findings and Orders for Heekin Can Company on September 19, 1985 and found that the company was in violation of emission standards between April of 1982 and September of 1984. OEPA ordered Heekin can to bring the side-seam and basecoat into compliance through a number of actions, including: installation of a third incinerator for lines C1, C2, and C8; conversion of line C7 coatings to those

with low volatile organic organics; conducting emission tests; reporting of monthly records; and payment of a \$37,000 fine (Reference 104).

Heekin Can Company paid the \$37,000 fine on December 4, 1985 (Reference 103). SWOAPCO found that, by January 14, 1986, Heekin Can had met the compliance milestone dates stated in the Findings and Orders (Reference 102).

From 1986 to 1988, Heekin Can Company reported a number of incinerator malfunctions, the longest of which occurred between April and December of 1987 when the Feco incinerator was down. Records do not clearly indicate whether the operation lines were stopped during some of these malfunctions (Reference 97).

III. ENVIRONMENTAL SETTING

A. Meteorology and Air Quality

The climate of Hamilton County is classified as continental, with winters comparatively short and mild, and summers long but frequently hot and humid. The average annual precipitation for the past 27 years of record is 40.07 inches (Reference 51). Precipitation is well distributed throughout the year, as the difference in the amount of precipitation received in March, the wettest month at 4.18 inches, and October, the driest month at 2.28 inches, is normally less than two inches. Thunderstorms occur about 45 days per year, and most often during the summer. The average seasonal snowfall is about 17 inches. The greatest snow depth at any one time period was 16 inches in Cincinnati (Reference 51).

During winter, the average temperature is 33°F and the average daily minimum temperature is 24°F. The lowest temperature on record is -20°F. The average summer temperature is 74°F, with an average daily maximum temperature of 85°F. The highest recorded temperature is 101°F. Average relative humidity in mid-afternoon is about 60 percent. Humidity is highest in the morning, and the average at dawn is about 80 percent (Reference 51). The mean wind speed is about 11 miles per hour during the winter, and about seven miles per hour during the summer. The prevailing wind direction year round is from south-southwest (Reference 79).

Heekin Can Company has been cited for releasing hazardous constituents to the air from their three-piece can operation. Volatile organics are used in many plant processes. As a result, releases of air emissions from manufacturing areas is apparent, although emissions are presumed nonhazardous unless the filter systems or incinerators malfunction. SWMUs in other locations exhibit relatively lower releases potential to air.

B. Surface Water and Flood Plain Information

The Heekin Can site is located less than half a mile south of the Little Miami River, and approximately one mile southwest of the confluence of the East Fork and the main channel of the Little Miami River. According to the flood plain map provided with the facility's Part B Permit Application, no portion of the facility is located within the boundaries of the 100- or 500-year floodplains. Exhibit 14 shows the location of the floodplain boundaries in the vicinity of the facility (Reference 77).

No perennial streams are located on the facility property. Gravel pits from mining operations are located adjacent to the facility property to the north, south, and east, many of which have filled with water and become lakes (Reference 78).

The Little Miami River flows generally southwest and drains into the Ohio River, approximately seven miles from the facility.

There are no large surface water drainage features on Heekin Can property although, the Little Miami River occurs approximately one-half mile north of the plant. Gravel pit lakes occur immediately northeast of the facility, and the lakes are recharged by ground water. As a result, the overall release potential to major surface water features through surface run off is relatively low, although cross-media contamination from discharged ground water into the lakes is possible, if ground water is contaminated.

C. Soils and Geology

The Heekin Can Company Broadwell Road facility is located in Hamilton County, which is in the Till Plains section of the Central Lowland Physiographic Province of southwestern Ohio.



Exhibit 14. 100 and 500-Year Flood Plain, Heekin Can Company Broadwell Road Facility.

The plant lies in a broad "buried" valley in the eastern-most portion of Hamilton County. According to information submitted to OEPA by Environmental Resources Management, the valley is a "remnant of an earlier drainage system which existed prior to Pleistocene glaciation and was partially filled with glacial drift and outwash" (Reference 37). The generalized surficial geology in the vicinity includes undifferentiated Quaternary deposits, including recent alluvial silt, sand, and gravel; Pleistocene fluvial gravel, sand, silt and clay, comprising dissected terraces and abandoned river channels; and laminated silt and clay of probable fluviolacustrine origin along the valleys (Reference 78).

According to Reference 37, sand and gravel deposits extend to a depth of 50 to 75 feet beneath ground surface in the vicinity of the site, and are underlain by an approximately 30- to 50-foot-thick clay layer. The clay layer is underlain by bedrock composed of inter-bedded shale and limestone. Bedrock is the Ordovician Kope Formation (Reference 78). Exhibit 15 provides the locations of the well logs and borings used to construct the representative cross section A-B, presented in Exhibit 16.

According to the Soil Survey of Hamilton County, the primary soil at the Heekin Can site is the Eldan-Urban Land complex (Reference 5). This complex is composed of a deep, nearly level, well-drained Eldan soil and Urban Land. The Eldan soil section consists of a surficial friable loam, subsoil of firm and gravelly clay loam, and a substratum of loose gravelly loamy sand that formed in the underlying stratified calcareous outwash sand on stream terraces and outwash plains (Reference 51). The Urban Land soil in the area of the Heekin Can Plant parking lots, streets, buildings, and

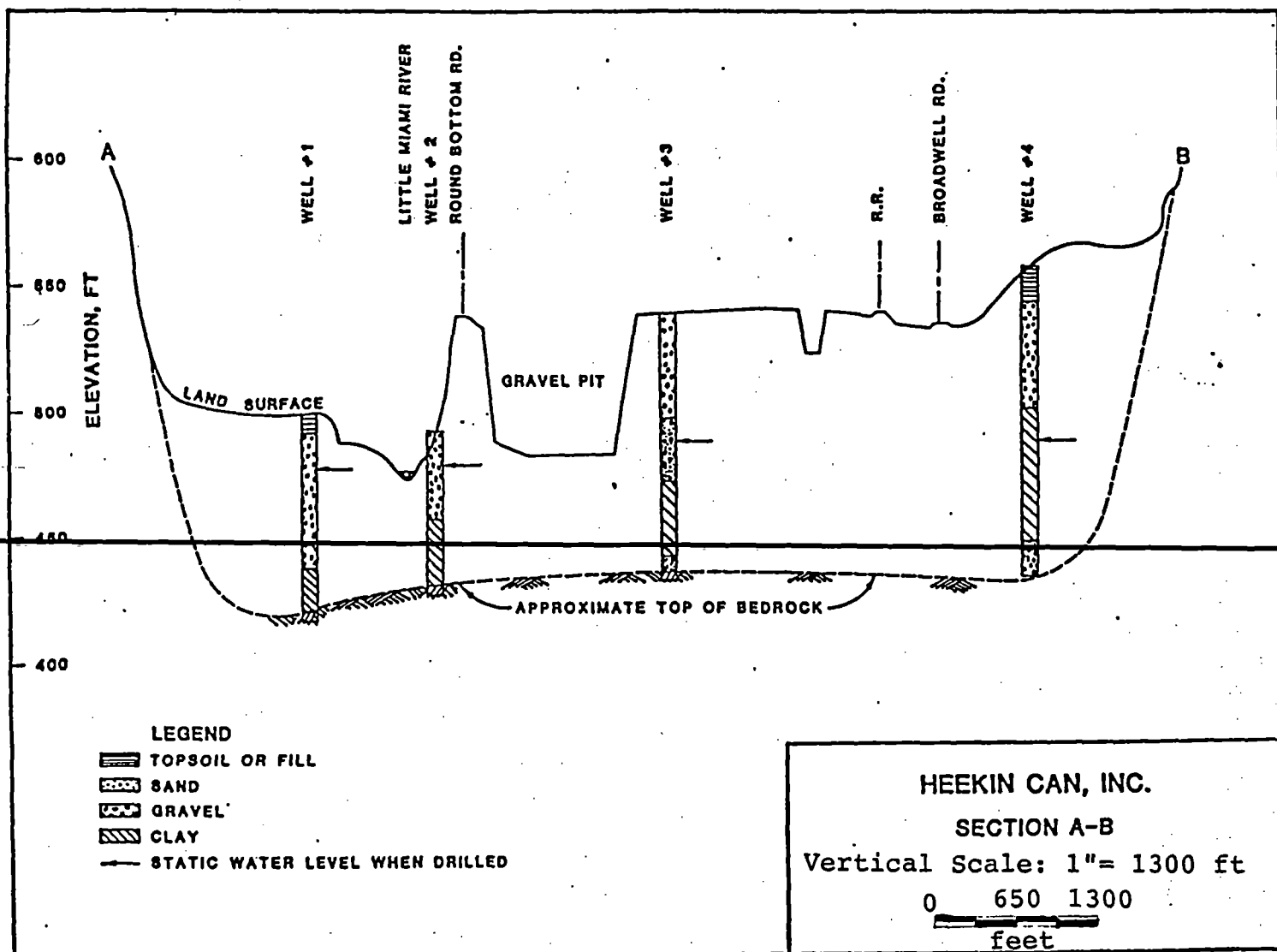


Exhibit 16. North-South Cross Section, Heekin Can Company.

associated fill material have altered the natural soil to the extent that characterization at the site is not possible. Permeability of the Eldan-Urban Land complex ranges from moderate to moderately slow (0.6 to two inches per hour) near the surface, to rapid or very rapid (greater than two inches per hour) in the substratum (Reference 51). According to the Soil Survey of Hamilton County, this soil may pose the hazard of ground-water pollution if it is used as a site for sanitary facilities (Reference 51).

Site data indicate that the sediments underlying Heekin Can Co. Broadwell Road plant consist primarily of gravels and sand, which are very permeable. As a result, the potential soil release is enhanced by the permeable substrate.

D. Ground Water

The saturated, unconsolidated sediments of the buried valley in the vicinity of the facility comprise a generally productive aquifer, according to information presented by Environmental Resource Management (Reference 37). Wells in the area of the facility are estimated to produce 500 gallons per minute (gpm), although clay in the deeper portions of the valley fill may result in a slightly reduced yield. About ten public water supply wells are located in the Heekin Can Plant area which individually produce between 400 gpm to 800 gpm. According to Reference 37, "about six residents within 3,000 feet of either the sanitary or process water discharge of Heekin Can (east of the Little Miami River) rely upon ground water as a source of water supply." Facility representatives did not know the precise location of these wells. The plant receives its water from the city of Cincinnati's municipal water supply, which is the Ohio River.

Based on water level measurements taken in 1983, the direction of ground-water movement is to the northwest. Static water levels in wells near the facility were at approximately 50 feet beneath the ground surface, according to the April 1983 cross sections provided in Reference 37. Facility representatives indicated that water levels in the Land Application Treatment area (SWUM No. 23) were shallower which indicated that a shallower water-bearing zone was also present in this area, or that ground-water mounding from the irrigation process may be occurring.

According to Reference 37, there is a direct hydraulic connection between the Little Miami River and the regional aquifer. Reportedly, river water will infiltrate into the aquifer during periods of sustained high flow, creating a rise in water level in wells near the river. ~~During periods~~ of sustained low river flow, the river receives flow from the aquifer. The average rate of ground-water movement in the vicinity is in the range of one to ten feet per day, with hydraulic conductivities ranging from 10^{-2} to 10^{-3} cm/sec. for gravels (aquifers), to 10^{-5} to 10^{-9} cm/sec. for silt and clays (aquitards).

Since the release potentials to soils are generally low and because the water table is relatively deep under the plant, the release potential of hazardous constituents to ground water is reduced. The permeable nature of the substrate, however, would enhance infiltration.

E. Receptor Information

Heekin Can Company is located near the Little Miami River, in an area used for light industry, gravel mining, and residences. The facility is approximately ten miles east of the center of Cincinnati in Hamilton County, Ohio. It is located in Anderson Township, approximately midway between Terrace

Park, which is about 1.5 miles upstream from the facility, and Newtown Village, which is approximately two miles downstream from the facility (References 78 and 144). The Chamber of Commerce of Hamilton County reported the population of Terrace Park to be 2,000, Newton Village to be 2,020, and Hamilton County to be 873,900 (Reference 145).

Pop. >

Gravel pits are located adjacent to the facility to the north, south, and east. Commercial/industrial development is located adjacent to the facility to the southeast, and residential development is present to the west and northwest (References 78 and 144). Several residential communities are located within one mile of the facility, mainly adjacent to the Little Miami River.

~~The nearest major potential surface water receptor is the~~ Little Miami River which is located less than one-half mile north of the facility (Reference 144). About ten public supply wells are located in the plant area, and about six residents within 3,000 feet of the facility use this ground water as a water supply source (Reference 32).

The prevailing wind is from the south-southwest. A residential community is located within one mile downwind of the facility (References 79 and 144).

IV. RELEASE PATHWAYS

Hazardous constituents may migrate to various media from the SWMUs identified in this PR/VSI Report. The following summarizes the release potential to soil/ground water, surface water, air and through the generation of subsurface gas from SWMUs identified at Heekin Can Co.

A. Soil/Ground Water

The release potential to soil from SWMU Nos. 1 to 9, which occur in the enclosed manufacturing area, are low or low to none. This is because of the enclosed containment of the units and apparent intact nature of the concrete flooring beneath the units, as well as the solid nature of some wastes handled (SWMU Nos. 6-8). ~~SWMUs associated with the portion~~ of the wastewater treatment system that is enclosed within the manufacturing areas (SWMU Nos. 16-19) exhibit no current release potential to soil because the units are inactive, although a low release potential may have been higher when the units were in operation.

Those SWMUs that occur outdoors as either drummed waste storage areas or as part of the wastewater treatment system exhibit a higher potential for release to soil. The empty drum storage areas (SWMU Nos. 10 and 12) exhibit a low release potential to soil, although the drummed hazardous waste storage areas (SWMU Nos. 11 and 13) represent a low to moderate release potential to soil due to the unbermed nature of the storage areas, proximity of unprotected soil, and volume and type of wastes handled. It is difficult to determine the release potential from the former drummed chrome-sludge storage area (SWMU No. 15) because the area is no longer in use and no visual evidence of release was apparent; the past release potential may have been higher, depending on storage practices. The current release

potential of hazardous constituents from the scrap yard (SWMU No. 14) is low, although the undetermined nature of materials potentially stored in a large, scrapped metal tank may change this assessment.

Outdoor SWMUs associated with the wastewater and biological treatment systems also exhibit relatively higher release potential to soils than do SWMU Nos. 1 through 9. The biological treatment plant has a low to moderate release potential to soils, dependent on the integrity of the plant's containment tank and the associated piping (SWMU No. 20). The low release potential from the wet well (SWMU No. 21) is also dependent upon the structural integrity of this relatively new portion of the treatment system. The storage pond (SWMU No. 22) exhibits a low to moderate release potential to soil, which is influenced by the effectiveness of the unit's clay liner and downward infiltration of surface water. The land application treatment system releases treated wastewater to soil. Because this is the intended purpose of this unit, the release potential of hazardous material is low, unless the treatment system malfunctions (Reference 22).

The release potential to ground water from the facility SWMUs is similar to the units' release potentials to soil. SWMU Nos. 1 through 9 have low or no release potential to ground water because of the enclosed nature of the units, the relatively deep (40 to 60 feet below ground surface) water table, and reduced influence of surface water infiltration. Perched saturated zones, however, may exist under some units. SWMU Nos. 16 through 19 are currently inactive and have no ongoing release potential to ground water, although a low release potential existed in the past, and residual contaminant occurrence is a low possibility. SWMUs 10 through 13 occur outdoors, but also have a relatively low potential for release to ground-water because of the depth to ground water, low or moderate likelihood of soil contamination, and reduced

influence of surface water infiltration because of the paved or cemented surface pad. However, should cracks in the pad occur or if no pad were present in the past, contaminants could wash through permeable soils to the water table. SWMU Nos. 14 and 15 currently exhibit a low ground-water release potential, although the historic storage practices in these units could have exposed hazardous material, such as chromium sludge or organics, to the soil. If this occurred, contaminants could have been washed through the soil column to the water table.

SWMU Nos. 20 through 23 exhibit a relatively higher release potential to ground water than other SWMUs. SWMU No. 20 exhibits a low to moderate release potential to ground water, dependent on the integrity of piping and the treatment tank, ~~as well as the potential for the spray field to wash releases~~ to the water table. Release potential from the wet well is low, although the release potential from the storage pond is low to moderate, depending on the integrity of the pond's lining, nature of materials underlying the unit, and the influence of surface water infiltration. SWMU No. 23 releases treated wastewater to ground water, but this is part of the system's design; the nature of materials disposed of in the land application treatment system is presumed non-hazardous (Reference 22).

B. Surface Water

The release potentials to surface water from SWMUs identified in this report are generally relatively low. SWMU Nos. 1 through 9 occur in enclosed indoor areas, and exhibit low or no release potential to surface water. Since SWMU Nos. 16 through 19 are currently inactive, no current release potential to surface water is apparent. A very low release potential from Unit Nos. 16 through 19 may have existed in the past, but the location of the units in an enclosed area

reduced the likelihood of contaminant transport to surface water features. SWMU Nos. 10 through 15, while outdoors, exhibit a low release potential to surface water because there are no obvious drainages from the units to a gravel pit lake located approximately 250 feet northeast of the units. Cross-media contamination of surface water is possible because ground water underlying the units discharges into the gravel pit lake.

Those SWMUs located outdoors and in association with the wastewater and sanitary sewer treatment system exhibit low to moderate release potentials to surface water. The biological treatment plant (SWMU No. 20) has a low release potential to surface water, dependent upon the potential for overflow of the unbermed unit onto surrounding soil and into nearby ditches. ~~The release potential from the wet well is low~~

(SWMU No. 21) and the release potential to surface water from the storage pond (SWMU No. 22) is also low. Surface run-off from the land application treatment may occur if proper land application processes were not implemented.

C. Air

SWMU Nos. 1 and 2 are designed to release material to the atmosphere, and are regulated by the Southwestern Ohio Air Pollution Control Agency. In the past, malfunctions of the incinerators allowed hazardous materials to be released in violation of Ohio Emissions Standards. SWMU No. 3 has a moderate to high release potential to air because of the volatile nature of material contained in the SWMUs and the open containers used to collect these materials. SWMU Nos. 4 and 5 have low to moderate release potentials to air. SWMU Nos. 6 through 8 exhibit no release potential to air because of the nonvolatile nature of waste handled in these units; SWMU No. 9, the Safety-Kleen unit(s), has a low release potential to air.

SWMUs associated with the drum storage areas (SWMU Nos. 10-13) have a low release potential to air because, although the drums contain volatile materials, the drums are of a closed design to contain emissions. SWMU Nos. 14 and 15 currently have a low to no release potential to air.

Those SWMUs associated with the wastewater and sanitary sewer treatment system (SWMU Nos. 16-23) generally exhibit low release potential to air because of the lesser quantities of volatile materials currently handled in the units. SWMUs 16 through 19 are presently inactive, so there is no current release potential from these units; however, the past release potential when chromium wastes were handled may have been higher because chromium rinses also contained organic compounds. SWMU No. 20 exhibits a low release potential of hazardous material to the air; the system is designed to degrade organic materials through aeration, which may generate organic gases. The gas concentrations, however, are not excessively high unless the system malfunctions.

D. Subsurface Gas

The potential for subsurface gas generation from these SWMUs is directly related to the potential for soil contamination and the nature of materials applied to the soil. SWMU Nos. 1 through 5 and Unit No. 9 have a low potential for subsurface gas generation because of the low potential for soil releases. SWMU Nos. 6 through 8 have no potential for subsurface gas generation due to the non-volatile nature of wastes handled in these units. A low release potential through subsurface gas is apparent for SWMU Nos. 10 through 13, as the release potential to soil is low. The release potential through subsurface gas from SWMU No. 14 is low to none, because of the apparent non-volatile nature of materials stored in the area and low likelihood of soil release. SWMU No. 15, however, may have a higher release potential to

generate subsurface gas, depending on sludge handling practices in the past. SWMU Nos. 16 through 19 are currently inactive, and the present likelihood of subsurface gas generation underlying these units is low to none due to the low potential for soil releases and relatively low organic content of wastes handled since 1986. The chromium waste handled by SWMU Nos. 16 through 19, however, contained elevated oil and grease which may have resulted in subsurface gas generation if the soil became contaminated.

The potential for subsurface gas generation associated with releases from SWMU Nos. 20 through 23 is generally low or low to none. SWMU No. 20 exhibits a low to moderate release potential because of the possibility of soil releases and generation of organic vapors through treatment. SWMU Nos. 21 through 23, however, exhibit low to no release potential because although soil release potential is moderate to high, the wastes handled have relatively low volatile organic content.

V. DESCRIPTION OF SOLID WASTE MANAGEMENT UNITS

This section presents detailed descriptions of each solid waste management unit identified during the PR and VSI. These descriptions encompass unit descriptions, dates of operation, waste managed, release controls, history of releases, and release potential to soil/ground water, surface water and air, in addition to the potential to generate subsurface gas.

Unit No.: SWMU No. 1

Unit Name: Vapor Collection System
(Photographs 1-1, 1-2, 1-3, and 1-5)

Unit Description: The Vapor Collection System comprises a series of stainless steel hoods, approximately three feet in length and 15 inches in width, connected to approximately 12-inch ventilation shafts within the manufacturing buildings. The collectors are located over the four lithographic presses and seven of the eight coating lines at the three-piece, steel can operation. The collectors are also located over the labeling and coating production lines at the two-piece, aluminum can operation. Primary points of VOC emissions that are handled in the collection system are the base coat to metal sheets, an over-varnish to printed sheets, and side seam coatings. The unit appeared to be in good operating order during the VSI.

Date of Start-up: The general vapor collection system has been used at least since the 1960s, although modifications to the system, such as the addition of incinerators, have occurred.

Date of Closure: The unit is presently active and there is no anticipated date of closure.

Wastes Managed: The unit collects the volatile vapors, which include various F003 and F005 wastes, from the lacquers, paints, and other coatings from the steel and aluminum can manufacturing operations (Reference 1).

Release Controls: The waste vapors are sent within the enclosed unit to one of three incinerators (SWMU No. 2), or through a filter before the air is vented to the atmosphere. The filters are periodically cleaned, and filter wastes are disposed of in drums at the Waste Drum Storage Areas (SWMU Nos. 11 and 13). The units are also indoors.

History of Releases: There are documented releases from the unit; however, all releases are currently regulated. Prior to installation of the unit, the facility had been fined by the state for air emission violations.

Conclusions: Soil/Ground Water: The current and past potential for a release to soil/ground water is none to low due to the enclosed nature of the unit and the vaporous nature of the wastes handled.

Surface Water: The current and past potential for a release to surface water is none to low due to the enclosed nature of the unit and the vaporous nature of the wastes handled.

Air: The unit releases filtered or incinerated emissions to the air. These units are part of the two-piece and three-piece cans which are regulated under air permits Nos. 1431340460K002 and 1431340460K001, respectively.

Subsurface Gas: The potential for the generation of subsurface gas is low due to the enclosed nature of the unit and the low potential for release to soil.

(References 1, 5, 87, 101, 104 and 120)

Unit No.: SWMU No. 2

Unit Name: Volatile Vapor Incinerators (3)
(Photograph 2-1)

Unit Description: The three Volatile Vapor Incinerators are located above the eight coating lines in the three-piece steel can operations building. Two Smith Incinerators and one Feco Incinerator are in use and are fueled by natural gas. The units could not be viewed during the VSI since the incinerators were enclosed by sheet metal and the vents of the Vapor Collection System (SWMU No. 1), and were very near the ceiling. The units were in good operational order during the VSI.

Date of Start-up: Early documentation indicates that two incinerators were in use during a 1974 inspection. It is presumed that these were not the Feco and Smith #1 incinerators, although conclusive documentation supporting this is not evident. The first confirmed start-up date for the Smith #1 Incinerator is 1984, and it was installed to incinerate emissions from coating lines C3 and C4. The Feco Incinerator was installed in 1984 for incineration of emissions from coating lines C5 and C6. The second Smith Incinerator (Smith #2) was installed in October 1985 for coating lines C1, C2, and C8. Line C7 is not vented to an incinerator.

Date of Closure: The units are presently active and there is no anticipated date of closure.

Wastes Managed: The units handle volatile organic vapors, which include various F and K wastes, collected from the Vapor Collection System (SWMU No. 1). Emissions from the units are vented to the air from the roof of the building.

Release Controls: Emission releases are regulated by the Air Quality Office of the Ohio EPA. The units are indoors.

History of Releases: There are documented releases from these units, although all releases are regulated.

Conclusions: Soil/Ground Water: The current and past release potential to soil/ground water is none to low due to the enclosed nature of the unit, occurrence indoors, and the vaporous nature of the wastes handled.

Surface Water: The current and past release potential to surface water is none to low due to the enclosed nature of the unit, occurrence indoors, and the vaporous nature of the wastes handled.

Air: The units are designed to emit incinerated gases. These units are on the three-piece manufacturing lines, which operated under air permit No. 1431340460-K001.

Subsurface Gas: The potential for the generation of subsurface gas is none to low due to the enclosed nature of the unit, occurrence indoors, and the vaporous nature of the wastes handled.

(References 1, 83, 85, 87, 90, 93, 95, 96, 97, 101, 104, and 118)

Unit No.: SWMU No. 3

Unit Name: Scraper Coating Buckets
(No photograph available at this time)

Unit Description: The Scraper Coating Buckets are five-gallon, plastic, or metal buckets located on the concrete floor adjacent to each of the eight coating machines and each of the four lithographic presses in the three-piece, steel can operations building. The units collect the used solvents gathered from the continuous cleaning of the rollers that feed steel sheeting to the can processing machines.

Date of Start-up: The start-up date of the Scraper Coating Buckets was approximately the 1960s.

Date of Closure: The units are presently active.

Wastes Managed: Various waste solvents (F003, F005) are collected from roller-cleaning operations.

Release Controls: When the Scraper Coating Buckets are nearly filled with used solvents, the waste solvents are transferred to a Satellite Waste Accumulation Area (generally SWMU No. 5A).

History of Releases: The units appeared to be in good operating order during the VSI, and there was no evidence of spillage from the units. There are no documented releases from any of these units.

Conclusions: Soil/Ground Water: The current and past release potential to soil/ground water is low since the units occur on concrete flooring within the operations building.

Surface Water: The current and past release potential to surface water is none to low since the units occur on concrete flooring within the operations building.

Air: The current and past potential for release to air is moderate to high since the units are open-topped and the waste solvents are constantly being recycled to the rollers.

Subsurface Gas: The potential for generation of subsurface gas is low since the units are situated on concrete flooring within the operations building, and have a low soil release potential.

(References 1 and 146)

Unit No.: SWMU No. 4

Unit Name: Waste Coating Buckets (2)
(No photograph available at this time)

Unit Description: The Waste Coating Buckets consisted of five-gallon, plastic buckets located adjacent to the interior can coating machines on concrete floors within the two-piece aluminum can operations building. The units collected burned, water-based, epoxy and resin coatings used in the 360 degree coating operations. The units appeared to be in good operational order during the VSI, and there was no evidence of spillage from the units.

Date of Start-up: The units have been in operation since the mid-1960s.

Date of Closure: Use of the units was discontinued on July 17, 1989.

Wastes Managed: Various water-base, waste paints from interior coating operations were handled by the units.

Release Controls: When the Waste Coating Buckets were nearly full, the waste paints were transferred to the Satellite Waste Accumulation Area (SWMU No. 5D).

History of Releases: There are no documented releases from any of these units.

Conclusions: Soil/Ground Water: The current and past release potential to soil and ground water is low, as the units were placed on or near concrete flooring within the operations buildings.

Surface Water: The current and past release potential to surface water was none to low since the units occurred on concrete flooring within the operations buildings.

Air: The current and past release potential to air was low to moderate since the wastes were water-based lacquers that may have contained lower concentrations (relative to other types of coatings) of volatile organics.

Subsurface Gas: The potential for the generation of subsurface gas is very low because the wastes are water-based materials and because the release potential to soil is also low.

(References 1 and 146)

Unit No.: SWMU Nos. 5A, 5B, 5C, 5D

Unit Name: Satellite Waste Accumulation Areas
(No photograph available at this time)

Unit Description: The Satellite Waste Accumulation Areas consist of two to four, 55-gallon drums located on pallets in four different areas throughout the plant. These areas are the north end of the three-piece, steel can operations building (5A); south of the coiled, sheet metal storage area (5B); the punch press area (5C); and the two-piece aluminum can operations building (5D). All areas are on concrete flooring. The units appeared to be of good integrity during the VSI and there was no evidence of spillage, except around the base of the unit 5A (Reference 1). This spill was a dark, oily spot approximately one square foot in size.

Date of Start-up: The units have been in operation since the mid-1960s.

Date of Closure: The units are presently active.

Wastes Managed: Waste solvents, oils, and paints (D001, F003, F005) from various plant operations are brought to these units in Scraper Coating Buckets (SWMU No. 3), Waste Oil Containers, and Waste Coating Buckets (SWMU No. 4) and emptied into the funneled drums.

Release Controls: When the funneled drums are full, the drums are sealed and transferred to either the Two-Piece Waste Drum Storage Area (SWMU No. 11) or the Three-Piece Waste Drum Storage Area (SWMU No. 13) for eventual removal offsite. The drums are contained in enclosed, generally bermed areas with concrete flooring.

History of Releases: There are no documented releases from any of these units, however one drum had spillage around the base.

Conclusions: Soil/Ground Water: The current and past release potential to soil/ground water is low since the units occur on bermed concrete flooring within the operations buildings.

Surface Water: The current and past release potential to surface water is none to low since the units occur on concrete flooring within the operations buildings.

Air: The current and past release potential to air is low to moderate since the units are only open through a funneled top and are located within the enclosed operations buildings.

Subsurface Gas: The potential for the generation of subsurface gas is low since the units are situated on concrete flooring within the operations building, with a low likelihood of soil release.

(Reference 1)

Unit No.: SWMU No. 6

Unit Name: Satellite Scrap Metal Collection Areas
(No photograph available at this time)

Unit Description: The Satellite Scrap Metal Collection Areas are comprised of barrels or bins located throughout the production areas. Scrap metal, both treated and untreated, is collected from cutting and shaping of the steel and aluminum used in can manufacturing. All units rest in concrete flooring within the manufacturing building. All units observed appeared to be of good physical integrity during the VSI and the areas were well maintained.

Date of Start-up: The units have been in operation since the plant began operation in 1958.

Date of Closure: The units are presently active.

Wastes Managed: Scrap metal, both untreated and treated and with the various coatings used in can manufacturing, are managed by these units.

Release Controls: When full, the bins and drums are taken to the Scrap Metal storage area for eventual recycling.

History of Releases: There are no documented releases from any of these units.

Conclusions: Soil/Ground Water: There is low to no release potential to soil/ground water because the units occur on concrete flooring within the operations buildings, and the waste managed is solid in nature.

Surface Water: There is no release potential to surface water from these units.

Air: There is no release potential to air since the waste is solid and nonvolatile in nature.

Subsurface Gas: There is no potential for generation of subsurface gas, as the units occur on concrete flooring within the operations buildings, the waste managed is non-organic in nature, and the release potential to soil is very low.

Unit No.: SWMU No. 7

Unit Name: Scrap Metal Bailers
(No photograph available at this time)

Unit Description: The Scrap Metal Bailers consist of two, identical metal compactors approximately 15 feet in width by 15 feet in length and 8 feet in height. The units rest on concrete flooring at the north end of the two-piece, aluminum can production area. Scrap aluminum metal from the Satellite Scrap Metal Collection Areas (SWMU No. 6) are brought to the units for compaction into one-foot cubes. The cubes are placed on pallets and transferred to the Scrap Metal Storage Area (SWMU No. 8) when a pallet is full. The units appeared to be of good physical integrity during the VSI and the area was well maintained.

Date of Start-up: The units have been in operation since 1973.

Date of Closure: Use of the units was discontinued on July 17, 1989.

Wastes Managed: Scrap metal separated into untreated and treated metal batches are compacted and stored on segregated pallets.

Release Controls: The compacted, scrap metal cubes are placed on separate pallets off the concrete floor.

History of Releases: There are no documented releases from any of these units.

Conclusions: Soil/Ground Water: There is no release potential to soil/ground water since the units occur on concrete flooring within an operations building and the waste managed is solid in nature.

Surface Water: There is no release potential to surface water since the units occur on concrete flooring within a building.

Air: There is no release potential to air since the waste is nonvolatile and non-particulate in nature and is managed within an enclosed building.

Subsurface Gas: There is no potential for the generation of subsurface gas because the units occur on concrete flooring within a building, the waste managed is nonorganic, and there is a very low release potential to soil.

(References 1 and 146)

Unit No.: SWMU No. 8

Unit Name: Scrap Metal Storage Area (No photograph)

Unit Description: The Scrap Metal Storage Area is an approximately 20-foot square area located on concrete flooring at the north end of the two-piece, aluminum can production area just south of the Scrap Metal Bailers (SWMU No. 7). Scrap metal compacted into one-foot cubes at the Scrap Metal Bailers is placed on pallets and carried by forklift to the unit. The scrap metal is stored separately by type of metal and dependent whether the metal is treated or untreated. The metal is periodically shipped offsite for recycling or scrap. The unit area was in good operational order during the VSI and was well maintained.

Date of Start-up: The unit has been in operation since the 1960s.

Date of Closure: The unit is presently active.

Wastes Managed: Scrap metal is segregated by type (treated or untreated) and is stored on pallets at the unit.

Release Controls: The compacted scrap metal cubes are stored on pallets prior to removal offsite.

History of Releases: There are no documented releases from this unit.

Conclusions: Soil/Ground Water: The current and past release potential to soil/ground water is very low to none since the units occur on concrete flooring within a building and the waste managed is solid in nature.

Surface Water: There is no release potential to surface water, as the units occur on concrete flooring within a building, the waste managed is solid in nature, and there are no nearby surface water features.

Air: The release potential both presently and in the past to air is very low to none because the waste is nonvolatile and non-particulate in nature and managed within a building.

Subsurface Gas: There is no potential for the generation of subsurface gas because the release potential to soil is very low and wastes managed are not organic in nature.

(References 1 and 146)

Unit No.: SWMU Nos. 9A, 9B, 9C

Unit Name: Safety-Kleen Units (3)
(No photograph available at this time)

Unit Description: The Safety-Kleen units are 30-gallon drums, with attached washtubs, containing solvents for cleaning machine parts and tools. They are located in three different areas of the operations area. These areas are the color mixing room at the north end of the three-piece steel can operations building (9A); the metal coil warehouse (9B); and near the middle of the two-piece aluminum can operations area (9C). The drums of waste solvent are replaced approximately six times per year with clean solvent, and the drums are removed offsite by an outside contractor (Safety-Kleen). All units rest on concrete flooring. The units appeared to be of good integrity during the VSI.

~~Date of Start-up:~~ ~~The units have been active for a number of years, although the facility representative did not know the exact start-up date.~~

Date of Closure: The units are presently active.

Wastes Managed: Spent mineral spirits (D001, D008) and spent immersion cleaner (F002, F008) are handled by the unit.

Release Controls: The units are self-contained, with the solvent recycled from the drum to a washtub, then back to the drum. A cover is present to cover the washtub when the unit is not in use.

History of Releases: There are no documented releases from these units.

Conclusions: Soil/Ground Water: The potential for a release to soil/ground water is low since the units are self-contained and rest on concrete flooring within the operations buildings.

Surface Water: The current and past release potential to surface water is low because the units are self-contained and rest on concrete flooring within the operations buildings.

Air: The current and past release potential to air is low, as the units are self-contained with covers and are located within a building.

Subsurface Gas: The potential for generation of subsurface gas is low because the units are self-contained, rest on concrete flooring within the operations buildings, and the release potential to soil is low.

(Reference 1)

Unit No.: SWMU No. 10

Unit Name: #1 Empty Product Drum Storage Area
(Photograph 1-19)

Unit Description: The unit is contained in a 50 foot by 70 foot area and is used to store empty product 55-gallon steel and plastic drums. The unit is located approximately 100 feet northeast of the Bailer (SWMU No. 7) and is in a general storage area where filled product and hazardous waste drums are also stored (SWMU No. 11 and AOC A). Hundreds of empty, presumably unrinsed product drums that once contained solvents and acids are stored in this area; drums are generally stored upright or are stacked on their sides, and appear to be closed. Wood pallets are also stored in the general area. The storage area is cemented and backs up to the Dravo property. The facility representative could not provide a specific date when the pad was constructed. Cincinnati Drum and Barrel and Queen City Drum and Barrel collect the drums for reclamation.

Date of Start-up: According to plant representatives, the area has been used for storage since the 1960s.

Date of Closure: The area is currently in use for drum storage.

Wastes Managed: As previously discussed, the general area around the unit handles both raw product and hazardous wastes. The unit itself handles empty drums (and pallets) that formerly contained nitric, hydrofluoric, and sulfuric acids as well as 1,1,1-TCA, solvents, etc.

Release Controls: Drums appear to be closed, and have been placed in a cemented, unbermed, outdoor area.

History of Releases: No historical releases were disclosed by facility representatives, and none were noted during the VSI.

Conclusions:

Soil/Ground Water: The present release potential to soil is low. Should minor amounts of product remain in the drums, however, the soil could receive contamination through cracks in the flooring or overspill to soil over unbermed pad margins. The release potential to ground water is very low; first ground water exists approximately 50 feet below ground surface, and migration of organic product through soil would be impeded by the presence of organic carbon, degradation in the soil column, and low waste volumes. Past release potential is undetermined, as previous disposal practices are not documented. Release potential would be higher if the pad area had been cracked or uncemented in the past, increasing the infiltration rate.

Surface Water: The present release potential to surface water from this unit is low, and would result if spilled product were washed approximately 250 feet north to the gravel pit lake. Cross-media contamination may also occur should ground water receive wastes and discharge into the lake. Past release potential is undetermined, as previous disposal practices are not documented.

Air: The present release potential to air is low, as drums are sealed. Past release potential is undetermined, but could have been higher if drums were stored open.

Subsurface Gas: The present release potential is low, because the release potential to soil is low. The past release potential is difficult to determine, but may have been low to moderate and is dependent upon past disposal practices.

(References 1 and 77)

Unit No.: SWMU No. 11

Unit Name: #1 Drummed Hazardous Waste Storage Area
(Photograph 1-20)

Unit Description: This unit occurs in the same general area as SWMU No. 10, approximately 100 feet north of the Bailers (SWMU No. 7). The drummed wastes are stored outside on a 25 foot by 50 foot portion of the area's cement pad; the base appeared slightly sloped to the southwest and the area is unbermed. The facility representative could not provide a specific date of pad construction. The 55-gallon closed, steel drums are stored on wooden pallets. Approximately 30 drums filled with water-based lacquer waste from the 360° aluminum spray line, and 10 drums containing F003 waste from SWMU Nos. 5B-D, were present in the area at the time of the VSI. Chem-Waste picks up the waste drums weekly.

Date of Start-up: The area has been used since the 1960s.

Date of Closure: The area is currently in use.

Wastes Managed: Drums contain water-based lacquer wastes from the aluminum 360° spray line. Drummed F003 and F005 waste solvents that are collected at Satellite Waste Accumulation Areas 5B, 5C and 5D are also placed in this location, although wastes from SWMU No. 5A may, upon occasion, be stored in this area.

Release Controls: The storage area has a cement base, but is located outside and is unbermed.

History of Releases: No historical releases were disclosed by facility representatives and none were noted during the VSI.

Conclusions: Soil/Ground Water: The present potential for releases to soil is low to moderate. Although drums are sealed, spills could reach surrounding soil because of the unbermed nature of the storage area. The past release potential is difficult to assess, but could have been much higher if the area was ever unpaved. The present release potential to ground water is low, as the water table is approximately 50 to 60 feet below ground surface, and contaminant migration would be attenuated by the presence of organic carbon in the soil column. Further, the presence of the cement covering would impede surface water infiltration and slow downward contaminant migration to the water table. The past release potential to ground water would be higher if the area was ever unpaved or cracks were present in the pavement surface, thereby allowing for enhanced surface water and waste infiltration.

Surface Water: The present release potential to surface water is low, as spills would have to flow over 200 feet north to encounter the closest surface water feature. The past release potential may also have been low.

Air: The present release potential to air is low; the volatile nature of stored wastes indicates air release would probably occur if wastes were exposed to the atmosphere. The past release potential depends on past storage practices.

Subsurface Gas: The release potential resulting from subsurface gas is low to moderate, and is dependent on the release of these organic wastes to the soil column.

(References 1, 8 and 77)

Unit No.: SWMU No. 12

Unit Name: #2 Empty Product Drum Storage Area
(No photograph available at this time)

Unit Description: This unit is an outdoor storage area located approximately 100 feet northeast of the North Entrance to Building 9. The unit is approximately 100 feet long and 50 feet wide, and has a cement base that is unbermed. The facility representative could not provide a specific date that the storage pad was constructed. At the time of the VSI, over 100 empty, sealed (closed) 55-gallon steel and plastic product drums had been placed in the area. Drums were placed both of their sides and upright on wooden pallets. Cincinnati Drum and Barrel and Queen City Drum and Barrel collect the drums for reclamation.

Date of Start-up: The area has been used for storage since the 1960s.

Date of Closure: The area is currently in use.

Wastes Managed: The empty drums once contained product such as butyl cellosolve, Hysol 15, etc.

Release Controls: The unit has a cement base, but is outside and unbermed. Drums appear to be closed.

History of Releases: No historical releases were disclosed by facility representatives and none were observed during the VSI.

Conclusions: Soil/Ground Water: The present and past release potential to soil is low. Should minor amounts of product remain in the drums, the soil could receive small volumes of spilled product through cracks in the base or overspill along the pad's unbermed margins. The present release potential to ground water is very low, as the water table is approximately 50 to 60 feet below ground surface and organic wastes may be impeded by organic carbon or degraded prior to reaching the water table. Also, surface water infiltration would be greatly reduced by the cement pad. Past release potential may have been higher if the area was uncovered or the surface of the pad was cracked, allowing for enhanced surface water infiltration.

Surface Water: The present and past release potential to surface water is low, but releases could occur if spilled product flowed into the gravel pit lake approximately 200 feet northwest of the unit. Cross-media contamination from ground-water discharge into the lake may also occur if ground water contained contaminants.

Air: The present and past release potential to air is low, because drums are closed, although the past release potential may have been higher, depending on disposal practices.

Subsurface Gas: The potential for subsurface gas generation is low to moderate, because of the low soil release potential.

(References 1 and 77)

Unit No.: SWMU No. 13

Unit Name: #2 Drummed Hazardous Waste Storage Area
(Photograph 2-11)

Unit Description: The unit occurs in the same general storage area as SWMU No. 13, approximately 100 feet northeast of the North Entrance to Building 9. The unit is approximately 30 feet wide by 50 feet long, and has an unbermed cement base. Facility representatives could not provide a specific date of pad construction. At the time of the VSI, approximately 20 to 30 55-gallon steel drums containing hazardous wastes were stored in the area. Drums were on wooden pallets. Approximately 40 drums per week are generated, and are removed by Chem-Waste weekly.

Date of Start-up: The unit has been used since the 1960s.

Date of Closure: The unit is currently in use.

Wastes Managed: The wastes managed are principally from the over-coating varnish and lithographic processes conducted in Building 9, although wastes from the Satellite Waste Accumulation Points (particularly SWMU No. 5A) may also be stored here. Wastes are essentially F003, F005, and D001, and consist of mixes that may contain products such as: butyl cellusolve, Hysol 15, and PM acetate (ethylene glycol monomethyletum acetate).

Release Controls: The area is cemented, but is unbermed and is outdoors. Drums are closed, and some had plastic lids over the top.

History of Releases: No historical releases were disclosed by facility representatives and none were noted during the VSI.

Conclusions: Soil/Ground Water: The current release potential to soil from this unit is low to moderate; although the drums are sealed, a release could operate from an accident, (the wastes could flow over unbermed margins to surrounding soil). The current release potential to ground water is also low because the water table is approximately 50 feet below ground surface at the site, and contaminant migration would be impeded by the presence of organic carbon and reduced surface water infiltration because of the cement pad. The past release potential is difficult to determine, but could have been much higher. This is dependant upon past disposal practices and nature of the storage area; if the surface pad was cracked or uncemented, enhanced surface water infiltration would occur that could flush contaminants downward.

Surface Water: The current and past release potential to surface water is low, as spilled wastes would have to flow approximately 200 feet north to the gravel pit lake for surface water discharge. The potential for cross-media contamination is present, as ground water (which may contain releases) discharged into the pit.

Air: Since the drums are sealed, the ongoing release potential of volatile organics is low. However, should material from the drums be spilled, the releases to air would occur due to the volatile nature of the stored wastes.

Subsurface Gas: The release potential resulting from subsurface gas is low to moderate because the release potential to soil is low to moderate. However, should soil receive releases, the potential for subsurface gas generation is high due to the organic nature of the wastes.

(References 1, 8 and 77)

Unit No.: SWMU No. 14

Unit Name: Scrap Yard (Photograph 1-21)

Unit Description: This unit is located approximately 150 feet northeast of Building 2. The unit is essentially a storage area that is approximately 60 feet long and 30 feet wide, and has a cement base that is unbermed. The area stores scrap metal from the manufacturing areas, but also contained three closed, liquid-filled steel drums on a pallet and an approximately 8,000-gallon steel tank. The tank appeared rusted, and it was impossible to determine whether the tank was full or empty.

Date of Start-up: The general area has been used since the 1960s.

Date of Closure: The area is still actively used.

Wastes Managed: Scrap metal, including piping, metal benches, etc, from the manufacturing area has been placed in the unit. According to plant representatives, the three drums contained rainwater, but may be mixed with small amounts of product. The drums will be disposed of by Chem-Waste. The large metal storage tank had been placed on the margin of the unit; facility representatives did not know either the former or current contents of the tank.

Release Controls: The unit's base is cemented, but is unbermed and outdoors. The three 55-gallon drums were closed. The drums and tank appeared of good structural integrity.

History of Releases: No historical releases were disclosed by facility representatives, and none were observed on the VSI.

Conclusions: Soil/Ground Water: The release potential to soil and ground water is low to none, given the nature of most of the materials currently stored at the sight. The drums and tank appeared of good structural integrity. The past release potential may have been higher, depending on the nature of materials stored in the area.

Surface Water: The current and past release potential to surface water is low to none; spilled waste would have to flow over 150 feet north to the closest surface water body.

Air: The current release potential to air is very low to none. However, should materials in the tanks and drums be volatile, this release potential would be higher. The past release potential is dependent on the nature of materials stored in the area.

Subsurface Gas: The present release potential resulting from subsurface gas is very low to none, since materials at the site do not contain volatile materials. The release potential would be higher should the tanks or drums contain volatile wastes. The past release potential would also be higher if volatile wastes were ever stored at the site.

(Reference 1)

Unit No.: SWMU No. 15

Unit Name: Former Drummed Chrome-Sludge Storage Area
(Photograph 1-17)

Unit Description: Drummed Chrome-Sludge was placed in this unit north of the Bailer prior to off-site disposal. No drummed sludge was present in the area during the VSI, which had a cemented, unbermed, base and is currently being used for pallet storage. The facility representative did not know the exact dimensions of the storage area. Approximately 28 tons of sludge were produced annually.

Date of Start-up: The area was used for sludge storage since 1973.

Date of Closure: The area stopped being used for drummed chrome-sludge storage in the Spring of 1986.

Wastes Managed: Although no wastes are currently being managed at the site, trivalent chromium sludge from the chrome reduction waste treatment process was drummed and placed in the area prior to 1986. According to analyses provided by Hydro-Fax dated July 7, 1980, the centrifuge sludge (Assuming 20% solids after centrifuging) contained less than 0.5% iron hydroxide, 5.6% aluminum hydroxide, 3.3% chromium hydroxide (trivalent chromium), 11.1% calcium phosphate and calcium hydroxide, and 80% water. The Ohio EPA had determined that the sludge was hazardous in nature. The sludge contained a high percentage of oil and grease (Exhibit 10). Twenty-eight tons of waste chrome sludge was produced annually. The facility representative stated that most of this was "probably" drummed, and was shipped offsite.

Release Controls: The unit has a cement base, and is unbermed and outdoors. Historic release controls were not disclosed by the facility.

History of Releases: No historical releases were disclosed by facility representatives, and no indications of release, such as stressed vegetation, were immediately evident on the VSI. The facility representative did not provide additional, detailed information regarding storage and containment practices.

Conclusions: Soil/Ground Water: There is no present release potential to soil or ground water. However, the past release potential could be much higher if drums were stored on bare soil and if former containment practices were not adequate, particularly for bulked sludge. Further, attenuation of chromium by organic carbon is lower than for organics; chromium and other, more mobile compounds could have been more readily flushed through the soil column.

Surface Water: There is no present release potential to surface water, although the past release potential could have been higher if former containment practices were not adequate.

Air: The current release potential to air is very low to none, although the past release potential to air may have been higher because of the relatively high organic content of the wastes. The release potential to air in the past was also dependent upon sludge containment practices; drummed sludge probably had a low air release potential, while the release potential from bulked sludge may have been higher.

Subsurface Gas: The current release potential resulting from subsurface gas is low to moderate. If containment practices were adequate, then the release potential is low. However, the high organic content of the wastes and questionable containment practices (i.e. for bulk sludge storage) increase the release potential through subsurface gas.

(References 1, 39, 53, 74, and 77)

Unit No.: SWMU No. 16

Unit Name: Acid Bath Sump
(No photograph available at this time)

Unit-Description: This unit is a stainless steel sump that is below the aluminum can acid-bath spray line. The sump is approximately 40 to 50 feet long, 4 to 6 feet wide, and 1 to 2 feet deep, and collected acid waste water which was pumped to the Acid Waste Storage Tanks (SWMU No. 17). A steel grating was placed over the top of the sump. The spray line was in operation during the VSI, but the line and sumps are no longer in use.

Date of Start-up: The sump has been used since 1973.

Date of Closure: The sump ceased being used on July 17, 1989 (the week after the VSI).

Wastes Managed: The sump managed a mixture of hydrofluoric, sulfuric, and nitric acids. Material data sheets indicate that 10% hydrofluoric, 15% nitric, and 35% sulfuric acid were used. This sump also handled pre-1986 chromium waste, which contained hexavalent chromium as chromic acid and other acids.

Release Controls: The sump is located in an enclosed area with cement flooring.

History of Releases: No releases were disclosed by facility representatives and none were observed during the VSI.

Conclusions: Soil/Ground Water: There is no current release potential from the unit to soil or ground water because it is inactive and has been emptied. The past release potential to soil and ground water from this unit is low to none because of the concrete flooring and occurrence of the unit in an enclosed building.

Surface Water: There is no current release potential from the unit to surface water because it is inactive, has been emptied and is indoors. The past release potential to surface water is low because of the unit's location (indoor, concrete flooring).

Air: There is no current release potential from the unit to air because it is inactive and has been emptied. The past release potential to air was moderate because of the organic content of the waste and open-topped construction of the sump.

Subsurface Gas: The current and past release potential from the generation of subsurface gas is low because of the low release potential to soil, although the past potential was slightly higher because the chromium waste merged between 1973 and 1986 contained oil and grease (Exhibit 10).

(References 1, 20 and 77)

Unit No.: SWMU No. 17

Unit Name: Acid Waste Storage Tanks
(No photograph available at this time)

Unit Description: The unit consists of two fiberglass 7,200-gallon capacity tanks that were used to store acid wastes from the Acid Bath Sump. Wastes were then transferred to the neutralization bath for pH alteration. The tanks are approximately 15 to 20 feet tall and were in use at the time of the VSI. The tanks may have originally been used to store chromium waste waters, but were in an area that was cleaned under the 1987 Closure Operations. The acid waste treatment system has been closed since July 17, 1989.

Date of Start-up: Since 1986, the tanks were used to store acid wastes. Prior to this, the tanks may have been used for chromium waste storage, although facility representatives were unsure of the exact usage and start-up date.

Date of Closure: The unit was in use until July 17, 1989, when the two-piece can operation was shut down (approximately one week following the VSI).

Wastes Managed: Until July 17, 1989, the unit managed acid wastes that consisted of mixed hydrofluoric, sulfuric, and nitric acids. If the tanks were used prior to 1986, wastes managed in the unit at that time included hexavalent chromium waste. Analyses included in the Heekin Can Closure Plan indicate that pre-1986 influent to the waste water treatment system that may have been placed in the tanks contained phosphoric, chromic, and hydrofluoric acid. Heekin Can may also have used the system for a zirconium coating process between January of 1986 and approximately June of 1986. This process used nitric, phosphoric, fluoroboric, and hydrofluoric acids (Exhibit 11). According to a waste report submitted by ERM-North Central, the chromium waste feed (presumably pre-treatment) may also have contained organics (extractable hydrocarbons, oil, and gas), TSS, F, Al, and an acidic pH (Exhibit 10).

Release Controls: The tanks occur in an enclosed structure and are placed directly on concrete flooring. The area immediately surrounding the tanks is unbermed.

History of Releases: No historical releases were disclosed by facility representatives and none were observed during the VSI.

Conclusions: Soil/Ground Water: There is no current release potential to soil or ground water because the units are inactive and have been emptied. The past release potential to soil and groundwater is low, because of the tank location in an enclosed area with concrete flooring, and low likelihood of soil contamination.

Surface Water: There is no current release potential to surface water because the tanks are inactive and have been emptied. The past release potential to surface water is low to none, as the unit occurs in an enclosed area (building) and is several hundred feet south of present surface water features.

Air: There is no current release potential to air because the tanks are inactive, and have been emptied. Past release potential to air was low because of the enclosed nature of the tanks, although wastes handled between 1973 and 1986 contained organics.

Subsurface Gas: The release potential through subsurface gas is low, both currently and in the past, because of the low potential for soil contamination, although the volatile organic content of pretreatment chromium wastes may have been relatively high (Exhibit 10).

(References 1, 20, 74 and 77)

Unit No.: SWMU No. 18

Unit Name: Neutralization Bath
(No photograph available at this time)

Unit Description: This unit consists of a stainless steel, six-stalled open-topped tank that was used for pH neutralization of acidic wastes. The Bath is approximately 10 to 15 feet long, 4 to 5 feet wide, and several feet deep. Lime water is stored in an approximately 3,000-4,000 gallon tank adjacent to the Bath, and was added to neutralize the acidic influent. The neutralized effluent was pumped to the Biological Treatment Unit (SWMU No. 20). The Neutralization Bath is located in the Waste Treatment Area near the two-piece can coating line.

Date of Start-up: The tank was used for the chromium reduction/treatment process from 1973 to 1986, when the treatment process was changed to a non-chromium wash.

Date of Closure: The unit was in use until July 17, 1989, when the 2 piece line was shut down.

Wastes Managed: The influent to the unit was from SWMU No. 17 or SWMU No. 19 and, until 1986, consisted of chromic acid wastes with organics, TSS, and metals. These wastes were treated with sulfur dioxide and caustic to reduce hexavalent chromium to trivalent chromium. Treated effluent from this system (presumably before flocculation) contained iron, aluminum, and chromium (3+) hydroxide; no data are available to estimate TOC or oil and grease in this treatment phase. After the 1986 treatment process change which eliminated the chrome conversion coating, influent to the bath consisted of acidic wastes which were neutralized with lime and then pumped to the Biological Treatment Plant.

Release Controls: The unit is in an enclosed building with a concrete floor. The immediate area around the tank was unbermed.

History of Releases: Facility Representatives stated that chromium wastes had not spilled from the unit, and no releases were observed during the VSI.

Conclusions: Soil/Ground Water: There is no current release potential to soil and ground water because the unit is inactive and has been emptied. Past release potential to soil is low because the unit is indoors. The past release potential to ground water is low to none because of the deep water table, low possibility of soil contamination, and indoor location.

Surface Water: There is no current release potential to surface water because the unit is inactive. The past release potential to surface water is low to none due to the location of the unit relative to surface water features.

Air: There is no current release potential to air because the unit is inactive. The past release potential was probably low to moderate, and was dependent on the organic content, which was higher in wastes treated between 1973 to 1986 than in wastes treated from 1986 to 1989.

Subsurface Gas: The unit is currently inactive; the past release potential resulting from the generation of subsurface gas is low because of the relatively low likelihood of soil contamination (due to the indoor location), although the unit may have handled wastes with a relatively high pretreatment organic content (Exhibit 10).

(References 1, 20, 74 and 77)

Unit No.: SWMU No. 19

Unit Name: Former Chrome-Waste Storage Tank
(No photograph available at this time)

Unit Description: The unit consists of an approximately 4,000-gallon storage tank next to the Neutralization Bath that was used for chrome waste storage prior to treatment.

Date of Start-up: The unit was presumably installed in the 1970s.

Date of Closure: Heekin Can Co. stopped using the tank in 1986. It was included in the area to be cleaned, as shown in the 1987 Heekin Can Co. Closure Plan.

Wastes Managed: As with SWMU No. 17, this unit handled chromium acid wastes that may also have contained organic compounds, suspended solids, F, and Al. This unit was not used to store acid wastes from the post 1986 operation and was presumably cleaned under Closure Plan activities (Reference 20). Facility representatives stated that the tank is currently empty.

Release Controls: The unit occurs in an enclosed area with concrete flooring.

History of Releases: No historical releases were disclosed by the facility representative, and none were observed on the VSI.

Conclusions: Soil/Ground Water: There is no current release potential to soil and ground water because the unit is empty and unused. The past release potential to soil was low because the unit was in an enclosed structure with concrete flooring. The past release potential to ground water was low to none because of the relatively deep water table and low likelihood of soil contamination.

Surface Water: The unit is currently inactive and empty and has no ongoing release potential to soil and ground water. The past release potential to surface water is low because of the relatively great distance to the closest apparent surface water feature, although cross-media contamination through ground-water discharge may have occurred.

Air: There is no current release potential to air because the tank is empty. The past release potential to air was low because of the enclosed construction of the tank.

Subsurface Gas: The past and current release potential through subsurface gas is low because of low likelihood of soil contamination, although the organic content of untreated chromium waste may have been elevated (Exhibit 10).

(References 1, 20, 74 and 77)

Unit No.: SWMU No. 20

Unit Name: Biological Treatment Plant
(Photograph 2-5)

Unit Description: This Biological Treatment Plant is in the northeastern portion of the Heekin Can Property. The unit treated over 67,000 gpd from the waste treatment system and 30,000 gpd from the sanitary sewer system. Upon deactivation of the acid wastewater treatment system on July 17, 1989, this volume has probably decreased. The unit consists of an approximately 30 foot by 30 foot by 4 foot deep concrete tank, which is at ground level and is equipped with an aeration device. Piping, including those from the waste treatment plant, is included as part of this system. Wastes from the plant discharge into the Wet Well (SWMU No. 21) and are then pumped to the storage pond (SWMU No. 22).

Date of Start-up: The Biological Treatment plant was constructed in 1973 for treatment of sanitary wastes. The plant began accepting treated plant wastewater in 1987.

Date of Closure: The unit is currently operating, although inflow of treated wastewater from the two-piece can operation ceased on July 17, 1989.

Wastes Managed: The Biological Treatment Plant manages effluent from the sanitary sewer and until July 17, 1989, it also managed wastes from the acid waste treatment system. In 1986, influent from the wastewater treatment system to the Biological Treatment Plant contained (Reference 22) approximately 500 mg/l COD, 33 mg/l TSS, < .1 Total P, 140 mg/l total oil and grease, .2mg/l zinc, 36.7 mg/l Al, and 17.5 mg/l F. Analyses of sanitary sewer influent are unavailable. All wastes are treated to reduce organic content, to make the wastes suitable for Land Treatment Application.

Release Controls: The Biological Treatment Plant has a cement surface surrounding the cement holding basins, and the plant area is fenced. The area is not bermed.

History of Releases: No historical releases were disclosed by facility representatives and none were observed on the VSI.

Conclusions: Soil/Ground Water: Assuming that the underground piping from the acid wastewater treatment area is presently unused, the current release potential to soil is low to moderate and is dependent on the integrity of the unit's treatment tank and associated piping, and occurrence of spills over the concrete apron to adjoining soil. The past release potential was low, but could have been enhanced by leaks from the wastewater treatment piping system. Current and past release potential to ground water is also low to moderate; enhanced infiltration from the overlying spray field may help the wash leakage to the water table, as well as the permeable nature of underlying soils.

Surface Water: The current and past release potential to surface water features is low. If the system ever overflowed, wastes would flow into a small ditch (dry during the VSI) adjacent to the railroad tracks.

Air: The past and current release potential to air is low. Although the system is designed to enhance degradation (and hence cause gas generation) in wastewaters, concentrations of gases would be low due to the relatively lower organic content of the wastes in comparison to those SWMUs with higher air release potential (i.e. SWMU No. 3).

Subsurface Gas: The past and current release potential through subsurface gas is low and is dependent on leakage from the unit to the soil column and organic content of the wastes.

(References 1, 22 and 74)

Unit No.: SWMU No. 21

Unit Name: Wet Well (Photograph 2-8)

Unit Description: The Wet Well is located at the Biological Treatment Plant approximately 500 feet northeast of the Heekin Can Plant. The well is, essentially, a 5,000-gallon concrete sump (with a steel grating on top) that collects effluent from the Biological Treatment Plant and pumps this effluent to the Storage Pond (SWMU No. 22). When the Wet Well fills to near capacity, the storage pond pumps are triggered and water is pumped from the well to the pond. The entire Biological Plant-Wet Well area has a bermed concrete surface and is fenced.

Date of Start-up: The unit was constructed in approximately 1987 for use in conjunction with the Land Application Treatment System.

Date of Closure: The unit is currently operational.

Wastes Managed: The unit stores treated wastewater from the Biological Treatment Unit. Water quality data were not provided by the facility.

Release controls: The Wet Well is underground, and is constructed of concrete. It is located in a concrete-surfaced area that is fenced. The top of the well is open to the atmosphere, but is covered by an approximately 3 foot by 3 foot steel grating.

History of Releases: No historic release from the site were disclosed by plant representatives and none were observed during the VSI.

Conclusions: Soil/Ground Water: The past and current release potential to soil and ground water from this unit is low and is dependent on the quality of the well construction and its integrity. The unit is new, and hence time-dependent loss of unit integrity is less likely.

Surface Water: The past and current release potential to surface water is low to very low.

Air: The release potential to air is very low to none, as almost all volatile organics are presumably removed during prior treatment.

Subsurface Gas: As with air releases, the past and current release potential resulting from the generation of subsurface gas is low to none, as volatiles are essentially removed during prior treatment.

(Reference 1)

Unit No.: SWMU No. 22

Unit Name: Storage Pond (Photograph 2-4)

Unit Description: The Storage Pond is approximately one-half acre in size and has a recompacted clay liner, with a limestone (rock) surface covering placed on the clay. The storage pond receives water from the wet well and is the source of water for the Land Application Treatment System. The pond has a staff gage and would be approximately 13 feet deep if filled to its maximum capacity of 500,000 gallons. The pond is equipped with a flow meter and flow composite sampler at Lift Station A, and provides a five-day storage capacity.

Date of Start-up: The pond was constructed in 1987 in conjunction with the Land Application Treatment System.

Date of Closure: The pond is still in service.

Wastes Managed: Effluent from the Biological Treatment Plant is stored in this unit. Facility representatives did not provide water quality data for the unit.

Release Controls: The perimeter of the Storage Pond is fenced, and the pond has a compacted clay layer to reduce infiltration of pond waters into the ground.

History of Releases: Facility representatives did not disclose any releases, and none were observed during the VSI.

Conclusions: Soil/Ground Water: The past and current release potential to soil is low to moderate. The unit is lined with compacted clay that is probably not completely impermeable. The release potential to ground water is low to moderate because, although depth to ground water is over 40 feet, the added head from the pond could increase surface water infiltration through the permeable soil.

Surface Water: The past and current release potential to other surface water bodies is low because direct overflow to surface water features would probably only occur because of a system malfunction.

Air: The past and current release potential to air is low, as pretreatment probably removes most volatile organics.

Subsurface Gas: Although infiltration of pond waters may occur, the relatively low organic content would have a low release potential from the generation of subsurface gas.

(Reference 1)

Unit No.: SWMU No. 23

Unit Name: Land Application Treatment Area
(Photographs 2-6 and 2-7)

Unit Description: The Land Application Treatment Area is approximately five acres in size. The area is used for land-spray application of treated waters from the Storage Pond, which is effluent from the Biological Treatment Plant. The Application system consists of several spray heads, configured as shown in Exhibit 8, and can apply a maximum of 97,000 gallons per day (gpd). Three PVC monitoring wells have been installed around the site with one well upgradient and two wells downgradient. The two original downgradient monitoring wells (Nos. 2 and 3) were installed improperly and had to be extracted. Two new wells (Nos. 2A and 3A) were then installed. The water table is approximately 40 to 50 feet below ground surface, according to facility representatives.

Date of Start-up: The unit has been in use since June 2, 1987.

Date of Closure: The Land Application Treatment Area is currently in operation.

Wastes Managed: Water quality data from the monitoring wells indicate that the upgradient well generally has lower conductivity, fluoride, hardness, iron and nitrate than downgradient wells, although chloride, COD, total phosphorous, and sulfate contents in the upgradient well were higher than in the down gradient wells (Exhibits 12 and 13). Wells OW-1 (upgradient) and OW-2A (down-gradient) exhibit more similar water quality overall than that of well OW-3A. Time-contemporaneous sampling (allowing for infiltration rate) of the wells and the Storage Pond was apparently not conducted, making assessments regarding the effectiveness of the Land Application difficult. Water quality data for influent to the Application system was not provided by the facility.

Release Controls: A vegetative cover was grown over the treatment area to control run-off.

History of Releases:

By nature of the system, the Land Application Treatment Area operates under the premise of systematic releases to soil. Water quality data from upgradient and downgradient wells are different, indicating releases may have migrated to the water table.

Conclusions:

Soil/Ground Water: Although the system apparently discharges treated water to the soil and ground water, the past and current release potential of hazardous constituents is low, based on water quality data.

Surface Water: Although the surface of the Land Treatment Area has been vegetated to reduce run-off, some release to surface water features may occur, particularly to the gravel pit pond west of the site. However, no evidence of runoff was noted during the VSI, and the potential release of hazardous constituents is low, based on ground-water quality data.

Air: The current and past release potential to air is low, as most volatile organics should have been removed prior to application. However, spray systems are often used to disperse volatiles, in which case the intent of the system is to cause air releases.

Subsurface Gas: Although the soil column becomes saturated using this system, the past and current potential for subsurface gas generation is low because of the relatively low organic content.

(References 1, 11-16, 19, 21, 22, 24, 25, 27, and 30-36)

VI. AREAS OF CONCERN

One Area of Concern was identified at the facility and is described below.

Area of Concern A

Unit Name: Drummed Product Storage Area
(Photograph 1-18)

Unit Description: Drummed Product Containers are stored in the general storage area near SWMU Nos. 10 and 11. Over 50 steel 55-gallon full-product drums were stored in an approximately 50 foot by 50 foot area. The storage pad was cemented but unbermed. Drums were stacked upright and stored in pallets, and contain product such as Butyl cellosolve, PM Acetate, and Hysol 15. Two drums on one pallet exhibited obvious leakage onto the cement pad. The leak drained southeast toward the plant, but did not flow into any sewer lines.

(Reference 1)

VII. SUMMARY OF SUGGESTED FURTHER ACTIONS

<u>Unit No.</u>	<u>Unit Name</u>	<u>Operational Dates</u>	<u>Suggested Further Action</u>	<u>Evidence of Releases (yes/no)</u>
1	Vapor Collection System	1960s - present	No further action is suggested at this time.	Yes*
2	Volatile Vapor Incinerators (3)	Early 1970s - present	No further action is suggested at this time.	No**
3	Scraper Coating Buckets	1960s - present	A cover for the units may be warranted to decrease organic vapors to the air.	No
4	Waste Coating Buckets (2)	1960s - July 17, 1989	No further action is suggested at this time.	No
5A,5B 5C,5D	Satellite Waste Accumulation Areas	1960s - present	No further action is suggested at this time.	Yes
6	Satellite Scrap Metal Collection Areas	1960s - present	No further action is suggested at this time.	No
7	Scrap Metal Bailers	1973 - present	No further action is suggested at this time.	No
8	Scrap Metal Storage Area	1960s - present	No further action is suggested at this time.	No
9A,9B 9C	Safety-Kleen Units (3)	Unknown - present	No further action is suggested at this time.	No
10	#1 Empty Product Drum Storage Area	1960s - present	No further action is suggested at this time.	No
11	#1 Drummed Hazardous Waste Storage Area	1960s - present	Consider providing adequate secondary containment to contain spills in the storage area.	No
12	#2 Empty Product Drum Storage Area	1960s - present	No further action is suggested at this time.	No
13	#2 Drummed Hazardous Waste Storage Area	1960s - present	Consider providing adequate secondary containment to contain spills in the storage area.	No
14	Scrap Yard	1960s - present	Following additional research regarding contents and origin of the old @ 8000 gallon storage tank, sampling the contents of this tank may be necessary. The analytical suite should include both organics and inorganics.	No

<u>Unit No.</u>	<u>Unit Name</u>	<u>Operational Dates</u>	<u>Suggested further Action</u>	<u>Evidence of Release (yes/no)</u>
15	Former Drummed Chrome-Sludge Storage Area	1970s - 1986	The lack of information concerning sludge storage practices warrants further investigation to assure that no hazardous wastes have migrated into the soil column in the storage area. Assessment of the outer boundary of the storage area must first be determined from in-depth interviews with former and past employees, and review of aerial photographs, if available. If drums were stored in areas that are not or were not surfaced at one time, soil sampling should be conducted. A minimum of three locations should be sampled, with samples collected from 0-1, 2-3, and 4-5 feet depths. Analyses should be conducted for chromium (total and hexavalent), EP Toxicity metals, and organics (volatiles and semi-volatiles).	No
16	Acid Bath Sump	1970s - July 17, 1989	Since the sump is now empty, a visual inspection of the sump should be conducted to verify sump integrity.	No
17	Acid Waste Storage Tanks	Unknown - July 17, 1989	No further action is suggested at this time.	No
18	Neutralization Bath	1973 - July 17, 1989	No further action is suggested at this time.	No
19	Former Chrome-Waste Storage Tank	1970s - 1986	No further action is suggested at this time.	No
20	Biological Treatment Plant	1973 - present	No further action is suggested at this time.	No
21	Wet Well	1987 - present	No further action is suggested at this time.	No
22	Storage Pond	1987 - present	The storage pond waters should be sampled to determine influent water chemistry to the Land Application Treatment Unit. If hazardous constituents are found, then sampling should be conducted to determine if a release has occurred.	No

Unit No.	Unit Name	Operational Dates	Suggested Further Action	Evidence of Release (yes/no)
23	Land Application Treatment Area	1987 - present	The ground-water monitoring wells should be sampled to assess the effects of the treatment system through comparison of ground-water quality with influent water chemistry (SWMU No. 22). These data should also be compared with that of plant wastewater (Exhibit 10), to assess whether pipes may have leaked hazardous materials into the soil, which may in turn occur in ground water.	Yes*
AOC A	Drummed Product Storage Area	1960s - present	Clean-up of the spill area is suggested, and resultant wastes disposed of in an appropriate manner.	Yes

* As part of the unit's design; this unit's design is intended to release non-hazardous material below emission or water quality standards.

** Designed to incinerate waste, but during malfunctions emissions may occur.

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96. Emissions Inventory Data Sheet, for 1986, Heekin Can.

97. Correspondence, Mr. James Sadelfeld, Southwestern Ohio Air Pollution Control Agency, to Mr. Dave Reusch, Heekin Can Inc., Re: Acknowledgement of Receipt of Reports Regarding Malfunctions of the Feco and Smith Incinerators, and Request for Analysis from Tests of these Incinerators and a Catalytic Unit, September 2, 1986.
98. Correspondence, Mr. D. L. Reusch, Heekin Can Inc., to Mr. James Sadelfeld, Southwestern Ohio Air Pollution Control Agency, Re: Notification of Feco and Smith Incinerator Breakdowns, August 21, 1986.
99. Air Pollution Control Equipment Malfunction Report, Southwestern Ohio Air Pollution Control Agency, August 15, 1986.
100. Correspondence, Mr. D. L. Reusch, Heekin Can Inc., to Mr. James Sadelfeld, Southwestern Ohio Air Pollution Control Agency, Re: Feco Incinerator Breakdown, August 11, 1986.
101. News Release, Ohio EPA, Re: Ordering Heekin Can, Inc. to Pay a Civil Penalty of \$37,500 for Violating State Air Pollution Control Requirements, January 17, 1986.
102. Correspondence, Mr. Charles Schumann, Southwestern Ohio Air Pollution Control Agency, to Mr. Dave Brown, Ohio EPA, Re: Target Dates for Completion of Projects Identified in Heekin's Findings and Orders, January 14, 1986.
103. Correspondence, Mr. E. R. Jackson, Heekin Can Inc., to Legal Advisor, Ohio EPA, Re: Payment of \$37,500 fine, December 4, 1985.
104. Final Findings and Orders, Ohio EPA, December 2, 1985.
105. FFY 1986 Facility Inspection Report, Emissions, Heekin Can Inc., December 3, 1985.
106. Correspondence, Mr. James O. Payne, Ohio EPA, to Mr. Vincent Stamp, Dinsmore and Shohl, Re: Noncomplying Can Coating Lines at Heekin Can, Inc., September 19, 1985.
107. Correspondence, Dinsmore & Shohl, Attorneys at Law, to Mr. Jim Payne, Ohio Environmental Protection Agency, Re: Response to Findings and Orders, July 17, 1985.
108. Correspondence, Mr. D. L. Reusch, Heekin Can Inc., to Mr. David E. Faris, Southwestern Ohio Air Pollution Control Agency, July 29, 1985.

109. Air Pollution Control Equipment Malfunction Report for Heekin Can, Inc., Southwestern Ohio Air Pollution Control Agency, July 10, 1985.
110. Complaint Investigation Report, Anonymous, Re: Paint Fumes from Heekin Can, Inc., July 1, 1985.
111. State of Ohio Hazardous Waste Facility Board Public Notice, June 21, 1985.
112. 1985 Facility Inspection Report, Emissions, Heekin Can, Inc., Including Storage Tank Information, June 13, 1985.
113. Complaint Investigation Report, Filed by Mr. Roman, Re: Odors from Heekin Can Plant, February 5, 1985.
114. Correspondence, Mr. D. L. Reusch, Heekin Can Co., to Mr. Dave Faris, Southwestern Ohio Air Pollution Control Agency, Re: Notice of Smith Incinerator Operation, January 23, 1985.
115. Facility Record of Permit Applications, for Boiler, Process, Spray Booth, Stack and Other Emissions (K-Source), 1974-1984.
116. Correspondence, Mr. E. R. Jackson, Heekin Can, Inc., to Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, Re: Notification of Smith Incinerator Breakdown, December 21, 1984.
117. Record of Telephone Conversation, Dave Brown, Ohio EPA, and Southwestern Ohio Air Pollution Control Agency, Re: Draft Warning Letter to Heekin Can, November 29, 1984.
118. Correspondence, Mr. E. R. Jackson, Heekin Can, Inc., to Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, Re: Notification of Feco Incinerator Breakdown, October 31, 1984.
119. Record of Telephone Conversation, Dave Brown, SWOAPCA, to Ohio EPA, Re: \$300,000 fine for Heekin Can Co., September 25, 1984.
120. Correspondence, Dinsmore & Shohl, Attorneys at Law, to Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, Re: Heekin Can Three-Piece Can Coating Operation.
121. Complaint Investigation Report, Air Pollution Control, Submitted by Mr. Dale Schlanser, July 13, 1984.

122. Request for Alternative Compliance Schedule, Submitted by Heekin Can, Inc., to Southwestern Ohio Air Pollution Control Agency, May 11, 1984.
123. Correspondence, Mr. D. L. Reusch, Heekin Can Inc., to Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, Re: Request for Alternative Compliance Schedule for Over-varnish Coating Lines, February 14, 1984.
124. Correspondence, Mr. D. L. Reusch, Heekin Can Inc., to Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, Re: Request for Alternative Compliance Schedule for End Seal Compound Lines, January 24, 1984.
125. Correspondence, Mr. Jacques C. Mayer, Grace, to Mr. Dave Reusch, Heekin Can, Inc., Re: Tentative Schedule for Replacing DAREX 9101 System with a High Solids (VOC Compliant) Compound, January 13, 1984.
126. Correspondence, Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, to Ms. Laura Whitare, Ohio EPA, Re: Compliance Status of Heekin Can Company, Inc., December 19, 1983.
127. Correspondence, Mr. David Faris, Southwestern Ohio Air Pollution Control Agency, to Mr. E. R. Jackson, Heekin Can Company, Inc., Re: Non-Compliance of the Three Piece Can Coating Operation, December 8, 1983.
128. Compliance Monitoring Facility Inspection Report, Heekin Can, Inc., Conducted by David Faris, Southwestern Ohio Air Pollution Control Agency, November 29, 1983.
129. Facility Inspection Report, James Kring, Heekin Can, Inc. Re: Compliance with Air Quality Regulations, June 28, 1983.
130. Correspondence, Mr. E. R. Jackson, Heekin Can, Inc., to Mr. Charles Schuman, Southwestern Ohio Air Pollution Control Agency, Re: Verification that Side Seam Coating Lines Do Not Meet the 5.5 lb./gal. Limitation for VOCs, June 17, 1983.
131. Inter-Office Communication, State of Ohio, Bill Juris, Engineering Section, to David Lu, SWOAPCA, Re: No need for Heekin Can Variance Application for Side Seam Coating Operation, June 6, 1983.
132. Correspondence, Ohio EPA to Mr. E. R. Jackson, Heekin Can, Re: Notice of Incomplete Variance to Operate Application for Three-Piece Can Coating Requirements, April 5, 1982.

133. Correspondence, Mr. E. R. Jackson, Heekin Can, Inc., to Ms. Patricia P. Walling, Division of Air Pollution Control, Ohio EPA, Re: Discontinuation of Soldered Can Bodymatters, July 30, 1982.
134. Correspondence, Mr. E. R. Jackson, Heekin Can, to Mr. S. E. Kozdemba, Southwestern Ohio Air Pollution Control Agency, Re: Milestone Report for Air Quality Compliance, December 18, 1981.
135. Correspondence, Mr. T. L. Wilkening, Diamond International, to Mr. Jim Baird, Southwestern Ohio Air Pollution Control Agency, Re: Control Plan, December 1, 1981.
136. Complaint Investigation Report, Filed by Mr. Bill Taylor, Re: Smoke from Buried Residue Caused by Fire Department Training, October 15, 1980.
137. Control Plan for Hydrocarbon Emissions, submitted by Diamond International Corporation/Heekin Can to Southwestern Ohio Air Pollution Control Agency, May 2, 1980.
138. Correspondence, Mr. E. R. Jackson, Diamond International Corp., to Mr. J. Edward Luebering, Division of Air Pollution Control, Re: Status of Coating Operations, January 15, 1979.
139. Printout, OEPA Emergency Response Online System, Pollution Incidents for January 1978 through 1989; Heekin Can (Diamond International).
140. Complaint Investigation Report, Filed by Anderson Township, Re: Compliance Inspection, July 25, 1975.
141. Plant Inspection Report/Complaint Investigation Report, Filed by Anderson Township, Re: Compliance Inspection, October 15, 1974.
142. Facility Investigation Report, June 13, 1985.
143. Correspondence, E. H. Eisenberry, of Heekin Can Company, Inc., to W. E. Spies, of Ohio Department of Health, Filing of Request for Single Cell Induced Draft Cooling Tower, April 30, 1970.
144. USGS Topographic Map, Madeira Quadrangle, 1988.
145. Log of Telephone Conversation between Scott Palmer (A.T. Kearney) and Data Center Personnel at the Hamilton County, Ohio Chamber of Commerce, July 26, 1989.
146. Tour Guide, Heekin Can Company, 1989.

ATTACHMENT A

A. T. Kearney, Inc.
Suite 1300
One Tabor Center
1200 Seventeenth Street
Denver, Colorado 80202
303 572 6175
Facsimile 303 572 6181

Management
Consultants

ATKEARNEY

June 28, 1989

Mr. Bernie Orenstein
Regional Project Officer
U.S. Environmental Protection Agency
Region V, 5HR
230 S. Dearborn Street
Chicago, Illinois 60604

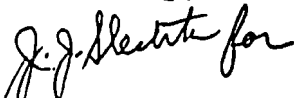
Reference: EPA Contract No. 68-W9-0040; Work Assignment
R05-01-05; Diamond International, Heekin Can
Company Division, Cincinnati, Ohio; EPA I.D.
No. OHD 004253225; VSI Agenda

Dear Mr. Orenstein:

Enclosed is a Visual Site Inspection (VSI) Agenda for the
Diamond International, Heekin Can Company Division Plant
for attachment to the VSI notification letter. An identi-
fied SWMU List (Attachment I) and the Preliminary Informa-
tion Needs List (Attachment II) are also included. The VSI
has been scheduled for July 11, 1989.

If you have any questions, please call me at 303-572-6175.

Sincerely,



James C. Carloss
Work Assignment Manager

Enclosures

cc: J. Mathieson, EPA Region V
P. Pardi, Ohio EPA
A. Glazer
J. Grieve
A. Anderson
J. Slechta
C. Walker
A. Williams
W. Rohrer, DPRA

RCRA FACILITY ASSESSMENT
VISUAL SITE INSPECTION AGENDA

FACILITY: Diamond International,
Heekin Can Division Plant
Cincinnati, Ohio

EPA I.D. NO.: OHD 004253225

FACILITY CONTACT: David Reusch

DATES OF INSPECTION: July 11, 1989

PERSONNEL: Jack Slechta, A.T. Kearney, Inc. (303) 572-6175
Connie Walker, A.T. Kearney, Inc. (303) 572-6175

1.0 PURPOSE OF INSPECTION

The Hazardous and Solid Waste Amendments of 1984 (HSWA) broaden the scope of EPA's authority under RCRA by requiring corrective action for releases of hazardous wastes and hazardous constituents at facilities that manage hazardous wastes. The RCRA Facility Assessment (RFA) is conducted to evaluate the potential for releases to the environment and the need for corrective action.

The RFA includes a desk-top review of available file information, a Visual Site Inspection (VSI) of the facility, and if necessary, a sampling visit. Based on the review of available data for this facility, a visual site inspection has been determined to be necessary. The purpose of the VSI is to:

1. Survey the site for hydrologic, geologic and surficial features.
2. Identify Solid Waste Management Units (SWMUs) and other areas of concern.
3. Review site information with facility representatives. Photographs are to be taken of all units and nearby surface water bodies.

2.0 INSPECTION ORGANIZATION

A.T. Kearney personnel will form a two-member team to perform a two-day inspection tour. The team, in general, will concentrate on developing a thorough understanding of past and present waste management activities. This will include inspection of process layout for production facilities, waste

generation, and disposal areas such as surface impoundments, waste piles, landfills, and container storage areas. The team will need to know the age and status of all waste management areas, as well as operating procedures, materials of construction, and release controls for all units. Pertinent geologic and other environmental setting information will be reviewed to aid in the assessment of SWMU release potentials. A thorough understanding of historical waste management practices will also be sought.

The overall rationale of this inspection plan is to enable the team to trace waste streams from process through treatment and disposal. A preliminary list of potential SWMUs has been developed after a review of available file materials and is included in Attachment I to this agenda. Further investigation during the VSI may reveal additional SWMUs, or that some units are not SWMUs. Some adjustments to the agenda will more than likely be necessary to accommodate facility staff, geographical location of units, and/or operational constraints.

Preliminary information needs are included as Attachment II to aid Diamond International, Heekin Can Division personnel in preparing for the site visit. The information needs will be discussed during the introductory meeting, and a more efficient schedule may be arranged at that time to ensure that all SWMUs will be inspected.

3.0 PROPOSED INSPECTION SCHEDULE

3.1 Introductory Meeting @ 8:30 a.m., July 11, 1989

Project team will meet with Diamond International, Heekin Can Division personnel to discuss:

- o Purpose of visit;
- o Agenda;
- o Safety and health considerations;
- o Transportation arrangements;
- o Facility history and operation; and
- o Additional information needs pertaining to SWMUs identified during the file review.

3.2 Inspection Tour

The inspection tour will include inspection of the areas and units identified in the attached List of Potential SWMUs found in Attachment I. A tentative schedule of viewing these SWMUs will be made by the facility.

3.3 Close-Out Meeting @ End of Day, July 11, 1989

Project team will meet with Diamond International, Heekin Can Division Plant personnel to conclude inspection visit.

ATTACHMENT I

PRELIMINARY LIST OF POTENTIAL SWMUS

1. Site of formal disposal of Baldwin Piano STP effluent
2. Former sludge drum storage areas
3. Wet well
4. Effluent storage basin
5. Former gravel pits (2)
6. Former Senco waste sites
7. All Safety-Kleen sites
8. Any former organic waste storage areas prior to Safety-Kleen
9. Vapor collectors on coating lines
10. Land treatment area
11. Disposal wells
12. Property along pipeline effluent
13. Paint booths
14. Two fume incinerators
15. VOC emissions sources
16. VOC capture system

ATTACHMENT II

PRELIMINARY INFORMATION NEEDS

For each individual SWMU, provide the following information:

- o Unit location;
- o Unit dimensions and construction details;
- o Period of operation (dates of start-up and closure);
- o Wastes managed (amount, type and source);
- o Release controls;
- o History of releases;
- o Whether unit is in 100-year floodplain;
- o Description of inspection and maintenance procedures to assure integrity of unit;
- o Process information and flow diagrams;
- o Waste characteristics;
- o NPDES permits, air permits; and
- o Facility maps or diagrams.

VISUAL SITE INSPECTION SUMMARY

Date: July 11, 1989

Participants: Connie Walker, A.T. Kearney
Jack Slechta, A.T. Kearney
Dave Reusch, Heekin Can Company

1.0 PURPOSE OF THE INSPECTION

A Visual Site Inspection (VSI) of the Heekin Can Company Broadwell Road Facility was conducted by A.T. Kearney, representatives of the U.S. EPA Region V, on the above date. The objectives of the VSI are to verify and determine the location of all Solid Waste Management Units (SWMUs), to visually inspect each SWMU, and to enable EPA representatives to attain technical understanding of current and historical waste management practices. Photographs (35 mm) of SWMUs were taken to document conditions at the facility and Waste Management Practices used. No samples were taken during the site visit.

An opening meeting was held with the above participants at 8:30 a.m. to discuss the purpose of the Visual Site Inspection (VSI), to present and discuss the planned itinerary, and to review major information needs from Heekin Can Company facility representatives. The weather was very hot and humid (approximately 95° and 95% humidity by mid-morning).

The VSI began at 10:07 a.m. All participants visited the three-piece can manufacturing operation, two-piece can manufacturing operation, Satellite Waste Accumulation Points, wastewater treatment facility, drum storage areas, former drummed chrome sludge storage area, one gravel pit lake, and scrap metal storage areas. The group broke for lunch at 12:05 p.m.

After lunch, the VSI continued with visits to additional sites in the manufacturing area, the biological treatment plant and storage pond, spray field, and a second gravel pit lake. A close-out meeting was held at 3:00 p.m. where additional data and information needs were discussed. The meeting was adjourned at approximately 3:45 p.m.

ATTACHMENT B

VSI LOGBOOK

July 11, 1989

0835: Arrive at Heekin Can; meet with Dave Reusch - no one else

Went over Baldwin/etc. lists
Wet well:

- 1) concrete holding basin is wet well sanitary + incl into package (biological) pumped into storage basin then into spray
- asked for a copy of wastewater treatment system
- 2) Gravel pit access may be difficult
- 3) Seno makes stapes for home construction + surgery
- 4) Prior to Safety Klean units, drummed waste for disposal
- 5) Using Safety Klean ^{aw} picks up solvent in wash tanks - S.K. Environ. ~~stems~~ do units; SK & waste go to different area

waste paint = 40 drums/week
 typical waste Butyl acrylate
 (glycol ether) methyl isobutyl
 range + naphtha, PM acetate,
 (ethylene glycol monomethyl
 ether acetate)

Saf K. Units: unknown how often
 they come in c 6 times/year

Formerly was going to mix

solvents then put in tank
 truck - did not do this -

continued to drum them

- waste solvents in back of

bdg - using Chem waste

currently (loading today)

No disposal wells - walls

used for production &

supply - not used; 2 have
 been shut in

Baldwin used to own

building

current source of water-city


no pipeline effluent pipe ever
 constructed

3 incinerators no paint booths

roll coating 2 incinerator

emission sources

1) end seal - rubber coating on end of

cans:  rubber
 - fugitive, no
 capture system

2) side seam stripe - welded in oven or

flame -> point source, stacks

above the stacks: up to 100

3) 360° spray: makes aluminum

beer cans -> sprayed -> baked ->

point source; coated -

coatings. Beer cans - water

born coatings most are

epoxy, resin.

4) Base coat C-02 300 in heaters
 except for C-04

Overturnish P-04 - lithograph

on flat sheet & metal, print

w/ inks and put in oven! put

varnish on lithographs -> baking

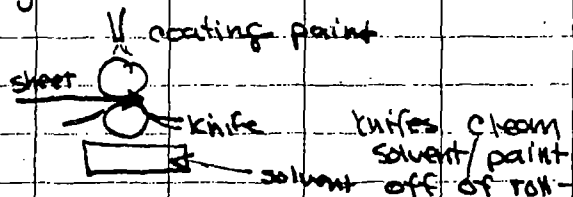
oven, stacks which are ~~modified~~
monitored by SW OAPCA

6. Inside spray (2 part + 3
~~part~~ 2 piece cans

- spray field not monitored for
Cr

Waste treatment - deals w/ cleaning
of cans/ washed w/ "water
soluble oil, then run thru 6
stage can washer - wastes
from this (acid water) →
wastes H₂O from this into
waste treatment system.

Origin of 40 drums/ month



this bath of solvent takes
paint off of drum -

when coatings are changed,
will also have waste solvent;
must also go into drums;

so 6-8 hrs (avg) the solvent
vat is emptied into 5
gallon buckets, then placed
into 55 gall. ~~of~~ drums.

Rolls 2 C1-C8
are on; P1-P4

Tour Guide may be available
Unsure of total size

Note:

~~The~~ Area was munitions plant
for World War I (unspecified
date) Baldwin made bomb
fuses in WWI.

Plant buildings

Lithography C1-C8

Old Bldg

New Bldg - Lithography system

will shut down 2pc July 15 (start
1973)

Both scrap steel and aluminum
(located: wirecoated), separated,
then both

Community supply wells -
town plant; River - hot monitored
by plant.
water from Ohio River via
Cincinnati

* # of employees: unknown

No longer Diamond International
now Freekin Can, Inc. (emid
1980's)

Will make a list of information/
questions unanswered during
this visit to Dave Reusch,
~~and we~~ who will answer
as many as possible

10:07 Began site tour to look
at the Starnus/AOCs

Entered new bldg w/ lines P:

Lithography presses: P

#1: P2 VOC collection system

(lithographic press) looking
south - varnish over ink

C's look same as P's, but

with no lithography roll

ex: C6 - typical (over)
coating line → applied

#2: collector on line C5

that goes to incinerator,
looking south on line
#3: vent system on line
C5 to incinerator

C5:6# Reco

1,2:8 → Smith #2

3:4 → Smith #1

#7 not incinerated

Asked about ~~data~~ for incinerator
will get - fumes from ovens
go to incinerators

At end of lines had 55
gallon drums w/ bent ends,
used ~~for~~ under straps around
sheeting:



metal received in coils; cut to
correct size sheets

Flammable storage room for
rubber seals

- over 50 stored, 4/ pallet -
floor unbermed

Area of wash^{er} up in flammable
storage area

Had 4-55 gallon drums on
pallets with funnels at top.
noted spill on floors around
drums, presumably from pouring

- the liquid-organic material
goes into a tank for separate

#4 photo: south of 4 drum
area. also had buckets of
mop water (2 @ 30 gallons w/
oil/water mix) → satellite acc.
Drums 4-1-89 pt.

OTO: enter 3pc. can manufacturing
area

on 3pc. line.

#5 NE: Photo of Vapor collection
Over side seam; vapors go
into collector (both before/
after oven) → filter; vapors
to atm. Filters are cleaned-
and reused - stuff from
filters put in drums - boom
in use as long as machine
has been here

Decreasing to four assembly
lines in 3 pc by end of year

observed end coating line

*P6: 1 waste oil, 1 waste solvent drums with funnels - not on pallets, but in brick bldg w/app 4" bermed floor - this bldg is in the storage area used to store end rubber, machine lubricants, etc. in use since can end line in use -

Drums taken to Drum area
* this is called a satellite collection area *

No labels on drums - some (8) drums of product outside area

This bldg also has water based seals as well as organics used for aerosols f/compatibility water driven off by heaters

most lithography on aerosol cans
Aerosol 50% of business -

6

Two piece all:

1) come in as coil, punched into cap then drawn into can wash ^{11"} \rightarrow clean \rightarrow coating (ink out) \rightarrow baked \rightarrow ash line;

P#7 Safety Clean unit, red 55 gallon drum - looking NE

"soluble oil" water used to wash the cans - recycled
- has 6 3' x 9' x 4' steel vats that contain acid washes for the can coating lines; this water goes down thru grating to the WWT - ~~has steam vent~~ up ~~to~~

#8 Acid bath wash line NE

Lithography applied to aluminum after the can is formed.

- then go to inside coating - ethyl eat coating of some sort that has a white wax-like substance which is collected in 5 gallon buckets - collected and sent out to be burned (where?)

9 waste water at
 HD waste paint drums & by
 ✓ F.P. @ 55 gallon drums,
 sealed looking S

Note: all wastes & metals

collected for recycling

11: Waste aluminum in yellow
 other looking

storage area looking east

was a map buried in

scrap bailer system for

metals

12 photo of bailer

system for scrap

aluminum, looking

East

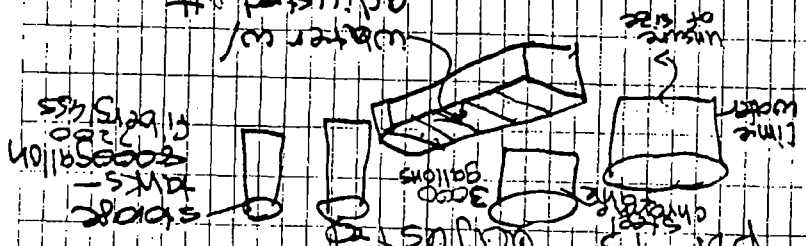
13. Satellite waste room,

area # 2 - looking

3 drums on pallets -

w/ drums

WWT P: has 4 vats in which



Tanks in enclosed area on
 concrete, not buried -

steel chrome dump tank
 no longer in use -

14 - fiberglass tanks

15 - pH - adj. vats - N

Note: 4th tank held Cr, only
 never overflowed had six

staged - generated at washing
 tank machine for Cr - no longer

- # 16: view of gravel pit
 has been mined since top

was app 5 are lake in
- this is off Heekin Property
owned by Dravo-

area of discharge
no obvious areas
of stressors

but couldn't see well (no access) - no water sample
#17 PR - fish in lake

#17. photo of former Cr

Sludge (drummed) storage
area - had 10 drums of

product - shipped to a
facility in Indianapolis

last used 10/1986

App 50 drums of product
stored in drum area -

too of when on pallets
but had obvious leaks

- on pallet (cement, no drums
#18: split out product storage

- storage area back of Dravo property

- 50' x 70' empty product
drum storage area

#19: photo of empty drum
storage area - drums go back
to manufacturer

green - water based layer
red = FeO₃ - FeO₂; from
aluminum was (satellite
collection)

#20 N, photo of waste storage
area 55' x 70' (50') - in area
of empty drums, on
pallets, sealed > 30 gms

#21 photo of waste metal
area & drums w/ rain

water - 3 SS Gall on
drums - w/ 11 have chemicals
come in - on pallets -

- photo of 'boneyard'
- scrap metal; had one 5000
gallon metal tank (? old?)
placed in scrapyard ? may
be empty - couldn't tell,
contents unknown

#22: photo of 5 gallon
bucket on line (8
that contains (eventual)
waste 800000 / 400000
(CI-CB, PI-PA) all have
these

visited ^{math. e} satellite accumulation
area for CI-CB/PI-PA; will
return after lunch for photos
+ more lunch

Broke for lunch at 12:00
134: Came back for briefing
- may have a additional safety
clean sites: located these
on the site map

Incinerators sit on top of the
Lines 1-8 Collection systems
dates of incinerator
Feco (S.S.G.) Sept 89
Smith 1 3:9 July 88
Smith 2 12:8 Oct 1988
these are dates of efficiency
tests

#2-1: Feco incinerator - shooting
NW

#2-2 Safety Clean Site in N part
bldg, looking west
2 units

#2-3 Accumulation area for
five gallon buckets for 2
waste solvent/paint mixture
3 barrels, one with funnel -
contains floor, barrel, looking NE -
in an area where lithographic
prints, etc. stored - 7-10-89
manifest

Note: dump w/ greating under 2 pc. aluminum can acid washers.

2-4 visited storage pond which waste is/may be stored prior to spray field - app

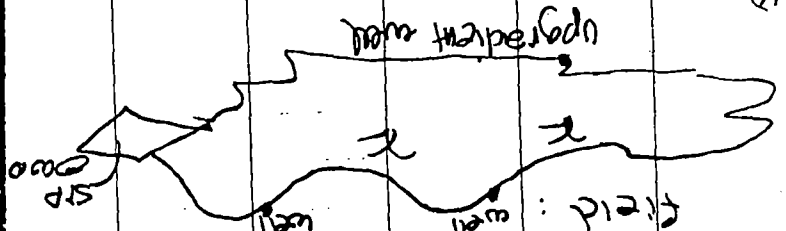
1/2 acre in size - contains STP and WUTP water - has recomposed clay river w/ ls rock on top in use since 1987

2-5 looking at WUTP + STP → Biological Treat

mont pond → storage wet well → field

Biological treatment center (= STP)

2-6 photo west of spray field: well



2-7 upgradient well in undu spray field is the same as that in the pit, and neither discharges into the Little Miami. Dave doesn't believe gutter

549.85' above MSL - wet well looking north →

2-8 wet well 5 acres landfarm I will send specific landfarm information - was spraying at the time of the visit

2-9 photo of Baldwin STP and Heclin STP / into the same site. impossible to tell ^{location of} effluent discharge also, no sign of stress of vegetation, etc.

2-10 - looking NE, another photo of lake

CERCLA ELIGIBILITY QUESTIONNAIRE

Site Name: Heekin Can Division
 City: Cincinnati State: Ohio
 EPA ID Number: OH0004253225

I. CERCLA ELIGIBILITY

Yes

No

Did the facility cease operations prior to November 19, 1980?

—

✓

If answer YES, STOP, facility is probably a CERCLA site.

If answer NO, Continue to Part II.

II. RCRA ELIGIBILITY

Yes

No

Did the facility file a RCRA Part A application?

✓

—

If YES:

1. Does the facility currently have interim status?

—

✓

2. Did the facility withdraw its Part A application?

✓

—

3. Is the facility a known or possible protective filer?
 (facility filed in error)

—

✓

4. Type of facility:

Generator ✓ Transporter — Recycler —
 TSD (Treatment/Storage/Disposal) —

Does the facility have a RCRA operating or post closure permit?

✓

—

Is the facility a late (after 11/19/80) or non-filer that has been identified by the EPA or the State? (facility did not know it needed to file under RCRA)

✓

—

If all answers to questions in Part II are NO, STOP, the facility is a CERCLA eligible site.

If answer to #2 or #3 is YES, STOP, the facility is a CERCLA eligible site.

If answer #2 and #3 are NO and any OTHER answer is YES, site is RCRA, continue to Part III.

III. RCRA SITES ELIGIBLE FOR NPL

Yes

No

Has the facility owner filed for bankruptcy under federal or state laws?

—

—

Has the facility lost RCRA authorization to operate or shown probable unwillingness to carry out corrective action?

—

—

Is the facility a TSD that converted to a generator, transporter or recycler facility after November 19, 1980?

—

EPA REGION 10
CERCLA/NPL ELIGIBILITY CHECKLIST
(CHECK ALL THAT APPLY)

SITE NAME: *Heekin Can Division*

DATE: *2/4/92*

- PETROLEUM EXCLUSION
 - ☐ exempt wastes present
- NRC
 - ☐ a federally licensed facility
- PESTICIDE SITE
 - ☐ legal application of pesticides in vicinity
- INDOOR AIR POLLUTANTS
 - ☐ present
- METHANE
 - ☐ present
- FEDERALLY PERMITTED RELEASE
 - ☐ present (specify-)
- MINING SITE
 - ☐ excluded waste (see 54 FR 15316)
- SPECIAL STUDY WASTE
 - ☐ mining waste (RCRA 3001(b)(3)(A)(ii))
 - ☐ drilling fluid (RCRA 3001(b)(2))
 - ☐ cement kiln dust (RCRA 3001(b)(3)(A)(iii))
 - ☐ fly ash (RCRA 3001(b)(3)(A)(i))
- RCRA
 - ☐ protective filer
 - ☐ non-notifier
 - ☐ convertor
 - ☐ generator or transporter
 - ☒ late filer
 - ☐ permit issued before HSWA (1984)
 - ☐ owner bankrupt
 - ☐ unwilling (see 53 FR 30005)
 - ☐ inability to pay (see 53 FR 30002)
 - ☐ TSD (give status and dates)

☐ NONE APPLY

special type of grass is
planted on landfarm -

"gr"
American Nitro is in cor area
with munitions

Baldwin Built Plant, sold
to Heekin. Heekin sold
to Diamond, then Diamond
bought out, then Westray
(William Simon - Ray Diamond)
bought Heekin, then they
got out, went public
& 1985, Heekin can
of today.

2-11 F003 F005 waste
drums in two storage
area in back of bldg 9 -
29-30 drums of waste
Also had 100's of empty
drums at this site waiting
for recovery - main tests
2 7-10 - wastes here
are from Bldg 9, essentially

1430 - filed to STE/Baldwin effluent
- came back to office, and
located on a map. This
pond is several (2-4) acres
large; will discharge to
Little Miami at NISN levels

National Historic - scenic
waterways - Little Miami

- will generate a data infor-

mation request list
ions mis. was undigested
time.

1) drums from Bldg 9 SCAP = F003/
F005 = color mixing
apiece 1976
apiece 1985

2) Drums pool in SW corner of
Bldg - standard solvents - from
processes in plant 3, general
line cleanup

3) in plant 2 (little brick bldg)
same as #2 above
4) F003 in SCAP in 2 piece
can line -

hexane is in rubber compound
in lids